EPA Jacket 228-724

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF
CHEMICAL SAFETY AND
POLLUTION PREVENTION

Carrie Tackema
Nufarm Americas, Inc.
11901 S. Austin Avenue
Alsip, IL 60803

JUL 17 2014

Subject: Upgrade Fungicide
EPA Reg. No. 228-724
Amendment to Basic CSF and Addition of Alternate CSFs #1 and #2
Submission Date 3/14/2014
EPA Decision Number 489604

Dear Mr. Tackema,

The basic Confidential Statement of Formula (CSF) and alternate CSFs dated 6/27/14 referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act as amended are not acceptable. The proposed basic and alternate CSFs #1 and #2 dated 6/27/2014 have not been found to be acceptable and will not be added to the product's regulatory file.

If you have any questions, please contact Erin Malone by phone at (703) 347-0253 or via email at malone.erin@epa.gov.

Sincerely,

Shaja B. Joyner
Product Manager 20
Fungicide Branch
Registration Division (7504P)

Malone, Erin

From: Malone, Erin
Sent: Wednesday, July 16, 2014 7:47 AM
To: 'carrie.tackema@us.nufarm.com'
Cc: Joyner, Shaja
Subject: RE: CSF Amendment for 228-724

Carrie,

The documentation to our request is section 152.85 of the CFR. The basics behind formulator's exemption is if you are purchasing the product thus exempting you from data compensation. However, if the products are owned by your company and you are not purchasing them then you need to provide a data matrix for the source as well as a cert. with respect to citation of data.

§ 152.85 Formulators' exemption.
(a) *Statutory provision.* FIFRA section
3(c)(2)(D) excuses an applicant from the requirement to submit or cite data pertaining to any pesticide contained in his product that is derived solely from one or more EPA-registered products which the applicant purchases from an- other person. This provision is commonly referred to as the formulators' exemption.

Please submit the requested matrices and certifications as soon as possible.

Regards,
Erin

From: carrie.tackema@us.nufarm.com [mailto:carrie.tackema@us.nufarm.com]
Sent: Tuesday, July 15, 2014 3:31 PM
To: Malone, Erin
Cc: Joyner, Shaja
Subject: RE: CSF Amendment for 228-724

Hi Erin,

I am waiting on a reply from Shaja. I emailed her on 7-2-14 and have not heard from her as of yet.

Best regards,
Carrie

Nufarm
Carrie M. Tackema
Regulatory Manager
Nufarm Americas, Inc.
4020 Aerial Center Parkway, Suite 101
Morrisville, NC 27560

☎: (919) 379-2528 (Office)
☎: (919) 323-1368 (Cell)
🖷: (919) 467-5923 (Fax)
✉: carrie.tackema@us.nufarm.com

From: "Malone, Erin" <Malone.Erin@epa.gov>
To: "carrie.tackema@us.nufarm.com" <carrie.tackema@us.nufarm.com>,
Cc: "Joyner, Shaja" <Joyner.Shaja@epa.gov>
Date: 07/15/2014 03:29 PM
Subject: RE: CSF Amendment for 228-724

Carrie,

It has been almost two weeks since my last email with you so I wanted to just check in and see if you plan on submitting matrices and cert. forms to support the proposed alternate CSFs.

Regards,
Erin

From: Malone, Erin
Sent: Wednesday, July 02, 2014 2:13 PM
To: 'carrie.tackema@us.nufarm.com'
Cc: Joyner, Shaja
Subject: RE: CSF Amendment for 228-724

Carrie,

These are Nufarm's products and do not qualify for formulator's exemption therefore we need data matrices and certification with respect to citation forms for both proposed alternate CSFs?

Have a great holiday weekend!

Thanks,
Erin

From: carrie.tackema@us.nufarm.com [mailto:carrie.tackema@us.nufarm.com]
Sent: Friday, June 27, 2014 1:03 PM
To: Malone, Erin
Subject: Re: CSF Amendment for 228-724

Erin,

The CSFs have been revised to reflect the correct registration number 228-724 and date. With regard to alternate #1, please provide the regulation or guidance document that states we cannot have a repack of an owned registrration, as this would seem to contradict PRIA category R300. Thank you.

Best regards,
Carrie

Nufarm
Carrie M. Tackema
Regulatory Manager
Nufarm Americas, Inc.
4020 Aerial Center Parkway, Suite 101
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☎: (919) 379-2528 (Office)
☎: (919) 323-1368 (Cell)
🖷: (919) 467-5923 (Fax)
✉: carrie.tackema@us.nufarm.com

From: "Malone, Erin" <Malone.Erin@epa.gov>
To: "carrie.tackema@us.nufarm.com" <carrie.tackema@us.nufarm.com>,
Date: 06/27/2014 10:23 AM
Subject: CSF Amendment for 228-724

Carrie,

I was in the process of denying this amendment when I realized what the problem is with this action. You included the wrong product number on all of your CSFs submitted with this action (720 instead of 724). This lead our inert reviewers to look at the wrong list of uses and therefore deny your inerts due to post-harvest uses being on the 720 label. I need revised proposed CSFs with the correct registration number in box 4 and revised dates in box 21. For the alternate #1 that is repacking 228-720, you need to list out the whole formulation since you own that product. Once I receive the revised documents, I will resubmit them for inerts review and then work through any other issues that may come up.

Thanks,
Erin

Erin Malone
Risk Manager
Environmental Protection Agency
Office of Chemical Safety and Pollution Prevention
(703) 347-0253
malone.erin@epa.gov

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Fax: +1 708 377 1333.

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401 M Street, S.W.
WASHINGTON, D.C. 20460

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Certification with Respect to Citation of Data

Applicant's/Registrant's Name, Address and Telephone Number	EPA Registration Number/ File Symbol
Nufarm Americas, Inc. **11901 S. Austin Avenue** **Alsip, IL 60803**	**228-724**
Active Ingredient(s) and/or representative test compound(s): **Azoxystrobin (PC code 128810)**	Date **July 16, 2014**
General use pattern(s) (list all those claimed for this product using 40 CFR Part 158) **Non-crop; Turfgrass**	Product Name **UPGRADE Fungicide**

NOTE: If your product is a 100% repackaging of another purchased EPA-registered product labeled for all the same uses on your label, you do not need to submit this form. You must submit the Formulator's Exemption Statement (EPA Form 8570-27).

☐ I am responding to a Data Call-In Notice, and have included with this form a list of companies sent offers of compensation (the Data Matrix form should be used for this purpose).

SECTION I: METHOD OF DATA SUPPORT (Check one method only)

☐ I am using the cite-all method of support, and have included with this form a list of companies sent offers of compensation (the Data Matrix form should be used for this purpose).	☒ I am using the selective method of support (or cite-all option under the selective method), and have included with this form a completed list of data requirements (the Data Matrix form must be used).

SECTION II: GENERAL OFFER TO PAY

[Required if using the cite-all method or when using the cite-all option under the selective method to satisfy one or more data requirements]

☒ I hereby offer and agree to pay compensation, to other persons, with regard to the approval of this application, to the extent required by FIFRA.

SECTION III: CERTIFICATION

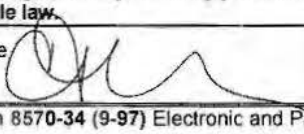
I certify that this application for registration, this form for reregistration, or this Data Call-In Notice is supported by all data submitted or cited in the application for registration, the form for reregistration, or this Data Call-In response. In addition, if cite-all option under the selective method is indicated in Section I, this application is supported by all data in the Agency's files that (1) concern the properties or effects of this product or an identical or substantially similar product, or one or more of the ingredients in this product; and (2) is a type of data that would be required to be submitted under the data requirements in effect on the date of approval of this application if the application sought the initial registration of a product of identical or similar composition and uses.

I certify that for each exclusive use study cited in support of this registration or reregistration, that I am the original submitter or that I have obtained the written permission of the original submitter to cite that study.

I certify that for each study cited in support of this registration or reregistration that is not an exclusive use study, either: (a) I am the original data submitter; (b) I have obtained the written permission of the original data submitter to use this study in support of this application; (c) all periods of eligibility for compensation have expired for the study; (d) the study is in the public literature; or (e) I have notified in writing the company that submitted the study and have offered (i) to pay compensation to the extent required by sections 3(c)(1)(F) and/or 3(c)(2)(B) of FIFRA; and (ii) to commence negotiations to determine the amount and terms of compensation, if any, to be paid for the use of the study.

I certify that in all instances where an offer of compensation is required, copies of all offers to pay compensation and evidence of their delivery in accordance with sections 3(c)(1)(F) and/or 3(c)(2)(B) of FIFRA are available and will be submitted to the agency upon request. Should I fail to produce such evidence to the Agency upon request, I understand that the Agency may initiate action to deny, cancel or suspend the registration of my product in conformity with FIFRA.

I certify that the statements I have made on this form and all attachments to it are true, accurate and complete. I acknowledge that any knowingly false or misleading statements may be punishable by fine or imprisonment or both under applicable law.

Signature	Date	Typed or Printed Name and Title
	**July 16, 2014**	**Carrie M. Tackema, Regulatory Manager**

EPA Form 8570-34 (9-97) Electronic and Paper versions available. Submit only Paper version.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

Form Approved OMB No. 2070-0060

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DATA MATRIX

Date July 16, 2014	**EPA Reg. No./File Symbol:** 228-724	Page 1 of 5
Applicant's/Registrant's Name & Address: Nufarm Americas Inc. 4020 Aerial Center Parkway, Suite 101 Morrisville, NC 27560	**Product Name:** UPGRADE Fungicide	

Ingredient(s): **Azoxystrobin (PC Code 128810)**

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter (Company No.)	Status	Note
	PRODUCT CHEMISTRY DATA REQUIREMENTS				
830.1550	Product Identity and Composition	49107101	228	OWN	
830.1600	Description of the Materials Used to Produce the Product	49107101	228	OWN	
830.1620	Description of the Production Process	N/A			1
830.1650	Description of the Formulation Process	49107101	228	OWN	
830.1670	Discussion of the Formation of Impurities	49107101	228	OWN	
830.1700	Preliminary Analysis	NA			2
830.1750	Certified Limits	49107101	228	OWN	
830.1800	Enforcement Analytical Method	49107101 49107102	228	OWN	
830.6302	Color	49107103	228	OWN	
830.6303	Physical State	49107103	228	OWN	
830.6304	Odor	49107103	228	OWN	
830.6313	Stability to normal / elevated temperatures, metals and metal ions	N/A			3
830.6314	Oxidizing/Reducing Reaction	49107104	228	OWN	
830.6315	Flammability	N/A			5

Signature	**Name and Title:** Carrie M. Tackema Regulatory Manager	**Date** July 16, 2014

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DATA MATRIX

Date July 16, 2014	**EPA Reg. No./File Symbol**: 228-724	Page 2 of 5
Applicant's/Registrant's Name & Address: **Nufarm Americas Inc.** **4020 Aerial Center Parkway, Suite 101** **Morrisville, NC 27560**	**Product Name**: **UPGRADE Fungicide**	

Ingredient(s): **Azoxystrobin (PC Code 128810)**

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter (Company No.)	Status	Note
830.6316	Explodability	N/A			6
830.6317	Storage Stability	- -			10
830.6319	Miscibility	N/A			7
830.6320	Corrosion Characteristics	- -			10
830.6321	Dielectric Breakdown Voltage	N/A			8
830.7000	pH	49107105	228	OWN	
830.7050	UV/Visible Absorption	N/A			3
830.7100	Viscosity	49107106	228	OWN	
830.7200	Melting Point	N/A			3
830.7220	Boiling Point	N/A			3
830.7300	Density, Bulk Density, Specific Gravity	49107107	228	OWN	
830.7370	Dissociation Constant	N/A			3
830.7520	Particle Size	N/A			9
830.7550 830.7560 830.7570	Partition Coefficient (n-octanol/water)	N/A			3

Signature	**Name and Title:** Carrie M. Tackema Regulatory Manager	**Date** July 16, 2014

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
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DATA MATRIX

Date July 16, 2014	**EPA Reg. No./File Symbol**: 228-724	Page 3 of 5
Applicant's/Registrant's Name & Address: **Nufarm Americas Inc.** **4020 Aerial Center Parkway, Suite 101** **Morrisville, NC 27560**	**Product Name**: **UPGRADE Fungicide**	

Ingredient(s): **Azoxystrobin (PC Code 128810)**

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter (Company No.)	Status	Note
830.7840 830.7860	Water Solubility	N/A			3
830.7950	Vapor Pressure	N/A			3

FOOTNOTES

1. The Description of the Production Process (830.1620) is not applicable to an end-use product [40 CFR §158.310(f)(3)]. See 830.1650 for formulation process information.
2. Preliminary Analysis (830.1670) data are not required since this product does not consist solely of the technical grade active ingredient (TGAI) and is not produced by an integrated manufacturing process [40 CFR §158.310(f)(10)].
3. Guidelines 830.6302, 830.6304, 830.6313, 830.7050, 830.7200, 830.7220, 830.7370, 830.7550, 830.7560, 830.7570, 7840, 830.7860, and 830.7950 – These data are not required since the product is an end use product [40 CFR §158.310 (e)].
4. Oxidizing/Reducing Reaction (830.6314) – requirement not applicable because product does not contain oxidizing or reducing agents [40 CFR §158.310(f)(13)]
5. Flammability (830.6315) data are not required since the product does not contain combustible liquids [40 CFR §158.310(f)(14)].
3. Explodability (830.6316) data are not required since the product is a water based solution and does not have explosive characteristics [40 CFR §158.310(f)(15)].
7. Miscibility (830.6319) data are not required since the product is not an emulsifiable liquid for dilution with petroleum solvents [40 CFR §158.310(f)(16)].
8. Dielectric Breakdown Voltage (830.6321) data are not required since the product is not for use around electrical equipment [40 CFR §158.310(f)(17)].
9. Particle size, fiber length, and diameter distribution (830.7520) - Data requirement not applicable since the product is not a water insoluble and/or fibrous substance [40 CFR §158.310(f)(23)].
10. Storage Stability (830.6317) and Corrosion Characteristics (830.6320) – studies to be submitted upon completion.

Signature	**Name and Title:**	**Date**
	Carrie M. Tackema Regulatory Manager	July 16, 2014

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DATA MATRIX

Date July 16, 2014	**EPA Reg. No./File Symbol**: 228-724	Page 4 of 5
Applicant's/Registrant's Name & Address: **Nufarm Americas Inc. 4020 Aerial Center Parkway, Suite 101 Morrisville, NC 27560**	**Product Name**: **UPGRADE Fungicide**	

Ingredient(s): **Azoxystrobin (PC Code 128810)**

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter (Company No.)	Status	Note
	ACUTE TOXICITY DATA REQUIREMENTS				
870.1100 / 81-1	Acute Oral Toxicity (RAT)	Cite-All		PAY	†
870.1200 / 81-2	Acute Dermal Toxicity	Cite-All		PAY	†
870.1300 / 81-3	Acute Inhalation Toxicity	Cite-All		PAY	†
870.2400 / 81-4	Primary Eye Irritation	Cite-All		PAY	†
870.2500 / 81-5	Primary Skin Irritation	Cite-All		PAY	†
870.2600 / 81-6	Skin Sensitization	Cite-All		PAY	†
	GENERIC DATA REQUIREMENTS			FORM	
	† Offers-to-pay are sent to the following registrants listed on EPA's April 8, 2013, Data Submitters List:	(100) SYNGENTA CROP PROTECTION, LLC		PAY	
		(7501) GUSTAFSON LLC		PAY	
		(34704) LOVELAND PRODUCTS, INC		PAY	
		(61842) TESSENDERLO KERLEY, INC		PAY	
		(66222) MAKHTESHIM AGAN OF NORTH AMERICA, INC		PAY	
		(66607) SPRAY DRIFT TASK FORCE		PER	††
		(71754) OUTDOOR RESIDENTIAL EXPOSURE TASK FORCE		PER	††
		(71755) AGRICULTURAL REENTRY TASK FORCE		PER	††

Signature	**Name and Title**: Carrie M. Tackema, Regulatory Manager	**Date**: July 16, 2014

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DATA MATRIX

Date July 16, 2014	**EPA Reg. No./File Symbol**: 228-724	Page 5 of 5
Applicant's/Registrant's Name & Address: **Nufarm Americas Inc.** **4020 Aerial Center Parkway, Suite 101** **Morrisville, NC 27560**	**Product Name**: **UPGRADE Fungicide**	

Ingredient(s): **Azoxystrobin (PC Code 128810)**

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter (Company No.)	Status	Note
		(73989) FIFRA ENDANGERED SPECIES TASK FORCE		PER	††
		(75234) AGRICULTURAL HANDLERS EXPOSURE TASK FORCE		PER	††
	†† Nufarm Limited is a member of this Task Force.				

Signature	**Name and Title:** Carrie M. Tackema Regulatory Manager	**Date** July 16, 2014

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FAST-TRACK AMEN MENTS – Completeness Scr..ning Checklist

Expert's In-Processing Signature: K Wong Date: 3/25/14 PM #: 20

EPA Reg. Number: 228-724	EPA Receipt Date: 3/18/14

1	**Application Form** (EPA Form 8570-1) - signed?	✓		
2	**Confidential Statement of Formula** (EPA Form 8570-29) - signed?			
3	**Certification with Respect to Citation of Data** (EPA Form 8570-34) - signed?			
4	**Formulator's Exemption Statement** (EPA Form 8570-27) - signed?			
5	**Data Matrix** (EPA Form 8570-35) [Applicable for adding me-too uses] - signed?			
	a) Selective Method?			
	b) Cite-All Method?			
	c) Public copy of Matrix provided? See PR Notice 98-5			
6	**Is Label included?** (5 copies)			
	a) Electronic Label submitted?			

Comments:

Inerts not approved for the intended use.
See Inert status form attached to the CSF.
A-Dokosai 4.1.14.

Needs inerts review

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

March 19, 2014

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

NATHAN P. EHRESMAN
NUFARM AMERICAS, INC.
NUFARM AMERICAS, INC.
4020 AERIAL CENTER PKWY., STE. 101
MORRISVILLE, NC 27560-

PRODUCT NAME: UPGRADE FUNGICIDE
COMPANY NAME: NUFARM AMERICAS, INC.
OPP IDENTIFICATION NUMBER:
EPA FILE SYMBOL: 228-724
EPA RECEIPT DATE: 03/18/14

SUBJECT: RECEIPT OF AMENDMENT

DEAR REGISTRANT:

The Office of Pesticide Programs has received your application for an amendment and it has passed an administrative screen for completeness.

During the initial screen we determined that the application appears to qualify for fast track review. The package will now be forwarded to the Product Manager for review to determine its acceptability for fast track status.

If you have any questions, please contact Registration Division, Risk Management Team 20, at (703) 308-3194.

Sincerely,

Front End Processing Staff
Information Services Branch
Information Technology & Resources Management Division

Fee for Service {949167L~

This package includes the following

- ○ New Registration
- ◉ Amendment

□ Studies? □ Fee Waiver?

□ volpay % Reduction: ___

for Division

- ○ AD
- ○ BPPD
- ◉ RD

Risk Mgr. 20

Receipt No. S-	949167
EPA File Symbol/Reg. No.	228-724
Pin-Punch Date:	3/18/2014

☑ This item is NOT subject to FFS action.

Action Code:

Requested:

Granted:

Amount Due: $ _____

Parent/Child Decisions:

A. Dabaghi 4.1.14

☑ Inert Cleared for Intended Use ☒ Uncleared Inert in Product

Reviewer: _____ Date: 3/19/14

Remarks:

EXPEDITE

EPA	United States Environmental Protection Agency Washington, DC 20460	☐ Registration ☒ Amendment ☐ Other:	OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number	2. EPA Product Manager	3. Proposed Classification
228-724	**Shaja Joyner**	☒ None ☐ Restricted
4. Company/Product (Name) **UPGRADE Fungicide**	PM# **20**	
5. Name and Address of Applicant *(Include ZIP Code)* **Nufarm Americas Inc. 11901 S. Austin Avenue Alsip, IL 60803** ***Please send all correspondence to "contact point" listed below***	6. **Expedited Review.** In accordance with FIFRA Section 3(c)(3) (b)(I), my product is similar or identical in composition and labeling to: EPA Reg. No.: _____ Product Name: _____	

Section - II

☒ Amendment – Explain below.	☐ Final printed labels in response to Agency letter dated _____
☐ Resubmission in response to Agency letter dated _____	☐ "Me Too" Application
☐ Notification - Explain below.	☐ Other - Explain below

Explanation: Use additional page(s) if necessary. (For Section I and Section II.)

Application for Amendment to Basic Confidential Statement of Formulation
Application for Alternate Confidential Statement(s) of Formulation

CONTACT INFORMATION:

Carrie M. Tackema
Nufarm Americas Inc.
4020 Aerial Center Parkway, Suite 101
Morrisville, NC 27560
(919) 467-5923 fax; carrie.tackema@us.nufarm.com

Section - III

1. Material This Product Will Be Packaged In:

Child-Resistant Packaging	Unit Packaging		Water Soluble Packaging		2. Type of Container
☐ Yes* ☒ No	☐ Yes ☒ No		☐ Yes ☒ No		☐ Metal ☒ Plastic ☐ Glass ☐ Paper ☐ Other (Specify)
***Certification must be submitted**	If "Yes" Unit Packaging wgt.	No. per container	If "Yes" Package wgt.	No. per container	

3. Location of Net Contents Information	4. Size(s) Retail Container	5. Location of Label Directions
☒ Label ☐ Container	**1 Qt - Bulk**	☒ On Label ☐ On labeling accompanying product

6. Manner in Which Label is Affixed to Product ☐ Lithograph ☒ Paper glued ☐ Stenciled ☐ Other _____

Section - IV

1. Contact Point *(Complete items directly below for identification of individual to be contacted, if necessary, to process this application)*

Name	Title	Telephone No. (Include Area Code)
Carrie M. Tackema	**Regulatory Manager**	**919-379-2528**

Certification

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

6. Date Application Received **(Stamped)**

2. Signature	3. Title	
	Regulatory Manager	
4. Typed Name **Carrie M. Tackema**	4. Date **March 14, 2014**	

+1 919.379.2510
+1 919.467.5923
4020 Aerial Center Parkway, Suite 101
Morrisville, NC 27560
www.nufarm.com

Via Courier Delivery

March 14, 2014

Ms. Shaja Joyner, PM#20
Document Processing Desk
Office of Pesticide Programs (7504P)
U. S. Environmental Protection Agency
Room S-4900, One Potomac Yard
2777 S. Crystal Drive
Arlington, VA 22202-4501

Contains Confidential Business Information

RE: ***UPGRADE Fungicide,* EPA Reg. No. 228-724**
Application for Amended Basic Confidential Statement of Formulation
Application for Alternate Confidential Statement(s) of Formulation

Dear Ms. Joyner:

Nufarm Americas, Inc. is submitting application(s) for amendment to include a revised basic CSF and two alternate CSF(s) for the above-referenced product. In support of this action, please find enclosed:

- Application for Pesticide Registration (AMEND);
- One copy of the Basic Confidential Statement of Formulation;
- Two (2) copies of AMENDED Basic Confidential Statement of Formulation;
- Two (2) copies of Alternate Confidential Statement of Formulation #1; and
- Two (2) copies of Alternate Confidential Statement of Formulation #2.

Please contact me at directly at (919) 379-2528 or by email at carrie.tackema@us.nufarm.com if you have any questions regarding this action.

Sincerely,

Carrie M. Tackema
Regulatory Manager

Enclosure(s)

EPA

United States
Environmental Protection Agency
Washington, DC 20460

☐ **Registration**
☐ **Amendment**
☒ **Other:**

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number	2. EPA Product Manager	3. Proposed Classification
228-724	**Shaja Joyner**	☒ None ☐ Restricted
4. Company/Product (Name) **UPGRADE Fungicide**	PM# **20**	
5. Name and Address of Applicant *(Include ZIP Code)* **Nufarm Americas Inc. 11901 S. Austin Avenue Alsip, IL 60803** ***Please send all correspondence to "contact point" listed below***	6. **Expedited Review**. In accordance with FIFRA Section 3(c)(3) (b)(I), my product is similar or identical in composition and labeling to: EPA Reg. No.: _____ Product Name: _____	

Section - II

☐ Amendment – Explain below.
☐ Resubmission in response to Agency letter dated _____
☐ Notification - Explain below.
☒ Final printed label
☐ "Me Too" Application
☐ Other - Explain below

Explanation: Use additional page(s) if necessary. (For Section I and Section II.)

CONTACT: **Carrie M. Tackema (919) 379-2528 or carrie.tackema@us.nufarm.com**
4020 Aerial Center Parkway, Suite 101
Morrisville, NC 27560

Section - III

1. Material This Product Will Be Packaged In:

Child-Resistant Packaging	Unit Packaging	Water Soluble Packaging	2. Type of Container
☐ Yes* ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Metal ☒ Plastic ☐ Glass ☐ Paper ☐ Other (Specifiy)
***Certification must be submitted**	If "Yes" Unit Packaging wgt. / No. per container	If "Yes" Package wgt. / No. per container	

3. Location of Net Contents Information	4. Size(s) Retail Container	5. Location of Label Directions
☒ Label ☐ Container	**1 Qt - Bulk**	☒ On Label ☐ On labeling accompanying product

6. Manner in Which Label is Affixed to Product ☐ Lithograph ☒ Paper glued ☐ Stenciled ☐ Other _____

Section - IV

1. Contact Point *(Complete items directly below for identification of individual to be contacted, if necessary, to process this application)*

Name	Title	Telephone No. (Include Area Code)
Carrie M. Tackema	**Regulatory Manager**	**919-379-2528**

Certification

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

6. Date Application Received **(Stamped)**

2. Signature	3. Title
	Regulatory Manager
4. Typed Name **Carrie M. Tackema**	4. Date **May 29, 2014**

Group 11 Fungicide

UpGrade™

Fungicide

Broad spectrum fungicide for the control of turf and ornamental plant disease and listed vegetable seedlings and transplants

ACTIVE INGREDIENT

Azoxystrobin (methyl (E)-2-{2-[6-(2-cyanophenoxy) pyrimidin-4-yloxy]-phenyl}-3-methoxyacrylate	22.9%
OTHER INGREDIENTS	77.1%
TOTAL	100.0%

Contains 2.04 pounds of active ingredient per gallon

KEEP OUT OF REACH OF CHILDREN.

CAUTION / PRECAUCIÓN

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

SEE LABEL BOOKLET FOR FIRST AID AND PRECAUTIONARY STATEMENTS

For Chemical Spill, Leak, Fire, or Exposure, Call CHEMTREC (800) 424-9300

For Medical Emergencies Only, Call (877) 325-1840

Manufactured for
Nufarm Americas Inc.
11901 S. Austin Avenue
Alsip, IL 60803

EPA Reg. No. 228-724 **EPA Est. No. 35935-NZL-001**

Net Contents
1 Qt. (946 mL)

Nufarm

FIRST AID	
IF ON SKIN OR CLOTHING	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
HOTLINE NUMBER Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact (877) 325-1840 for emergency medical treatment information.	

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION / PRECAUCIÓN

Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemically resistant to this product are listed below. If you want more options follow the instructions for Category A on an EPA chemical resistance category selection chart.

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical resistant gloves made of any waterproof material such as polyvinyl chloride, nitrile rubber or butyl rubber.
- Shoes plus socks

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions exist for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Controls

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240 (d)(4-6), the handler PPE requirements may be reduced or modified as specified in the WPS.

IMPORTANT: When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for "applicators and other handlers" and have such PPE immediately available for use in an emergency, such as a spill or equipment breakdown.

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Wash thoroughly with soap and water after handling.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to freshwater and estuarine/marine fish and aquatic invertebrates. Do not apply directly to water except as specified on this label. For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water

mark. Drift and runoff may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwater or rinsate.

The active ingredient, azoxystrobin, in this product can be persistent for several months or longer. Azoxystrobin has degradation products which have properties similar to chemicals which are known to leach through soil to ground water under certain conditions as a result of agricultural use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.

Notify State and/or Federal authorities and Nufarm immediately if you observe any adverse environmental effects due to use of this product.

PHYSICAL OR CHEMICAL HAZARDS

Do not mix or allow coming in contact with oxidizing agent. Hazardous chemical reaction may occur.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

FAILURE TO FOLLOW THE USE DIRECTIONS AND PRECAUTIONS ON THIS LABEL MAY RESULT IN PLANT INJURY OR POOR DISEASE CONTROL

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), notification to workers, and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water is:

- Coveralls
- Chemical resistant gloves made of any waterproof material such as polyvinyl chloride, nitrile rubber or butyl rubber
- Shoes plus socks

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box only apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses. Do not treat areas while unprotected humans or domestic animals are present in the treatment areas. Because certain states may require more restrictive reentry intervals, consult your State Department of Agriculture for further information.

Turf and Landscape Uses: Do not enter or allow others to enter the treated area until sprays have dried.

PRODUCT INFORMATION

This product is a suspension concentrate (SC) or flowable formulation. It is a broad spectrum, preventive fungicide with systemic and curative properties recommended for the control of many important plant diseases. This product may also improve the yield and/or quality of the crop. These additional benefits are due to positive effects on plant physiology. The effects may vary according to factors such as the crop, crop hybrid, or environment. This product may be applied as a foliar spray in alternating spray programs or in tank mixes with other registered crop protection products. Make all applications according to the use directions on this label.

USE PRECAUTIONS AND LIMITATIONS

Some phytotoxicity may be observed when applying tank mixtures of this product with emulsifiable concentrate (EC) formulations. These effects may be enhanced if applications are made under cool, cloudy conditions and these conditions remain for several days following application. In addition,

adjuvants that contain some forms of silicone may also contribute to phytotoxicity.

ATTENTION

This product is extremely phytotoxic to certain apple varieties.

AVOID SPRAY DRIFT. Extreme care must be used to prevent injury to apple trees (and apple fruit). Refer to SPRAY DRIFT MANAGEMENT information below.

DO NOT spray this product where spray drift may reach apple trees.

DO NOT spray apple trees with spray equipment previously used to apply this product. Even trace amounts of product may cause unacceptable phytotoxicity to certain apple and crabapple varieties.

SPRAY DRIFT MANAGEMENT

The interaction of many equipment and weather related factors determine the potential for spray drift.

DO NOT spray when conditions favor drift beyond the area intended for application. Conditions which may contribute to drift include thermal inversion, wind speed and direction, sprayer nozzle/pressure combinations, spray droplet size, etc. Contact your State Extension agent for spray drift prevention guidelines in your area.

DO NOT apply when weather conditions favor drift from treated areas to non-target aquatic habitat.

AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR.

INTEGRATED PEST MANAGEMENT (IPM)

To reduce the potential for development of resistance, integrate this product into an overall disease and pest management strategy whenever the use of a fungicide is required. Follow cultural practices known to reduce disease

development such as selection of disease-tolerant varieties, removal of plant debris in which inoculum overwinters, and proper timing and placement of irrigation. Consult with your State Agricultural Experiment Station or Extension Service specialist for additional IPM strategies established for your area. This product may be used in State Agricultural Extension advisory (disease forecasting) programs which recommend application timing based on environmental factors favorable for disease development.

Crop Tolerance: Plant tolerance has been found to be acceptable for all crops on the label. However, not all possible tank mixture combinations have been tested under all conditions. It is recommended to test tank mixture combinations on a small portion of the crop to assess plant response before large scale applications. See the USE PRECAUTIONS AND LIMITATIONS section for apple phytotoxicity information.

RESISTANCE MANAGEMENT

This product is a Group 11 fungicide. The mode of action for azoxystrobin, the active ingredient in this product, is the inhibition of the Qol (quinone outside) site within the electron transport system as well as disruption of membrane synthesis by blocking demethylation [Group 11]. Fungal pathogens can develop resistance to products with the same mode of action when used repeatedly. Because resistance development cannot be predicted, use this product in accordance with resistance management strategies established for the crop and use area. Consult your local or State agricultural authorities for resistance management strategies that are complementary to those in this label. Resistance management strategies may include alternating and/or tank-mixing with products having different modes of action or limiting the total number of applications per season. Nufarm Americas Inc. encourages responsible resistance management to

ensure effective long-term control of the fungal diseases on this label with Group 11 (QoI) fungicides.

Follow the crop specific resistance management recommendations provided in the directions for use.

If no resistance recommendation on number of applications is specified in the directions for use, follow the recommendations in the table below.

If planned total number of fungicide applications per crop is:	1	2	3	4	5	6	7	8	9	10	11	12
Recommended Solo QoI fungicide sprays	1	1	2	2	2	2	2	3	3	3	3	4
Recommended QoI fungicide sprays in mixture (tank-mix or formulated)	1	2	2	2	2	3	3	4	4	5	5	6

Under conditions requiring multiple fungicide applications, develop season long spray programs for Group 11 (QoI) fungicides. In crops where two sequential Group 11 fungicide applications are made, alternating with two or more applications of a fungicide that is not in Group 11 will help reduce the potential for resistance development. If more than 12 applications are made, observe the following guidelines:

- When a QoI fungicide is used as a solo product, make no more than 1/3 (33%) of the total number of fungicide applications per season with the QoI containing product.
- For programs including tank mixes or premixes of QoI fungicide with mixing partners of a different mode of action, the number of QoI containing applications must represent no more than 1/2 (50%) of the total number of fungicide applications per season.

- In programs including applications of QoI fungicides as both solo products and mixtures, the number of QoI containing applications must represent no more than 1/2 (50%) of the total number of fungicide applications per season.

If a Group 11 fungicide is applied to the seed or soil, do not make another application with a Group 11 fungicide for at least 3 weeks.

SOIL BORNE/SEEDLING DISEASE CONTROL

For crops that have specific use directions for soil borne disease control:

This product can provide control of many soil borne diseases if applied early in the growing season. Specific applications for soil borne diseases include in-furrow applications and banded applications applied over the row, either shortly after plant emergence or during herbicide applications or cultivation. These applications will provide control of pre- or postemergence damping off and diseases that infect plants at the soil-plant interface.

The use of either type of application depends on the regional cultural practices. In some locations, one type of application may provide better disease control than the other, depending on the timing of the disease epidemic. Seedling diseases are generally controlled by in-furrow applications while banded applications are more effective against soil borne diseases that develop later in the season. Consult your local expert to get some guidance regarding application type.

Under cool, wet conditions, crop injury from soil directed applications can occur.

Drip

Refer to the **Instructions for Use through Irrigation Systems (Chemigation) section.**

PRODUCT USE INSTRUCTIONS

Application: Thorough coverage is necessary to provide good disease control. Make no more spray solution than is needed for application. Avoid spray overlap, as crop injury may occur.

Adjuvants: The use of an adjuvant may improve consistency and performance of this product. Refer to crop specific directions for use for information regarding the use of adjuvants.

Efficacy: Under certain conditions conducive to extended infection periods, use another registered fungicide for additional applications once the maximum amount of this product has been used. If resistant isolates to Group 11 fungicides are present, product performance may be reduced for certain diseases. When heavy infection pressure exists, when treating varieties highly susceptible to disease, or when environmental conditions are conducive to disease development, best results are obtained when using the higher rates and/or the shorter spray intervals allowed in the crop specific use directions on this label.

MIXING AND APPLICATION INSTRUCTIONS

Spray Equipment

All types of spray equipment commonly used for ground and aerial applications may be used with this product. Proper adjustment and calibration of spraying equipment to give good canopy penetration and coverage is essential for good disease control.

Nozzles

- Equip sprayers with nozzles that provide accurate and uniform application.
- Use nozzles that are the same size and uniformly spaced across the boom.
- Calibrate sprayer before use.

- Use screens to protect the pump and to prevent nozzles from clogging.
- Use screens 16-mesh or coarser on the suction side of the pump.
- Do not place a screen in the recirculation line.
- Use 50-mesh or coarser screens between the pump and boom, and where required, at the nozzles.
- Check nozzle manufacturer's use guidelines.

Pump

- Use a pump with capacity to:
  a) Maintain 35 to 40 psi at nozzles.
  b) Provide sufficient agitation in tank to keep mixture in suspension. This requires recirculation of 10% of tank volume per minute.
- Use a jet agitator or liquid sparge tube for agitation.
- Do not air sparge.

For more information on spray equipment and calibration, consult sprayer manufacturers and state agricultural agency for advice. For specific local directions and spray schedules, consult your state agricultural agency for advice.

Spray Solution Preparation

- Proper mixing of this product with water requires use of a spray tank equipped with agitation.
- Prepare only the amount of spray solution required for immediate use. Do not allow spray mixture to stand overnight or for prolonged periods.
- Thoroughly clean spray equipment before preparing the spray solution.
- Maintain constant agitation throughout the spraying operation.
- Rinse spray tank thoroughly with clean water after each day's use and dispose of pesticide rinsate by application to an already treated area.

Stand-alone product solution:

- Add 1/2 to 2/3 of the required amount of water to a spray or mixing tank and begin agitation.
- Add the specified amount of this product to the tank.
- Continue agitation while adding the remainder of the water and allow time for good dispersion.
- Begin application of the spray solution after the product has completely dispersed in the mix water and maintain agitation during spraying.

Tank mixture with other products:

- Add 1/2 to 2/3 of the required amount of water to a spray or mixing tank and begin agitation.
- Add tank mix partners to the tank in the following order: 1) wettable powder and water dispersible granule (WDG) formulations, 2) liquid flowables (aqueous suspensions), and 3) emulsifiable concentrates.
- Allow the material to completely dissolve and disperse into the mix water.
- Continue agitation while adding the remainder of the water and this product to the tank mix and allow time for good dispersion
- Begin application of the spray mixture while maintaining agitation.

Compatibility

This product is compatible with many pesticides and additives commonly used in tank mixtures. To determine the physical compatibility of this product with other products prior to full scale use, conduct a jar test as follows: Using a quart jar, add the proportionate amounts of the tank mixture components to 1 qt. of water. Add wettable powders and water dispersible granule (WDG) products first, then liquid flowables, and emulsifiable concentrates last. Mix thoroughly and let stand for at least 5 minutes. If the combination remains mixed or can be remixed readily, it is

physically compatible. Once compatibility has been confirmed, use the same procedure for adding required ingredients to the spray tank.

NOTE: Some phytotoxicity may be observed when applying tank mixtures of this product with emulsifiable concentrate (EC) formulations. These effects may be enhanced if applications are made under cool, cloudy conditions and these conditions remain for several days following application. In addition, adjuvants that contain some forms of silicone may also contribute to phytotoxicity.

INSTRUCTIONS FOR USE THROUGH IRRIGATION SYSTEMS (CHEMIGATION)

- Use only on crops for which chemigation is specified on this label.
- Apply this product through 1) sprinkler irrigation systems including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move; 2) drip irrigation systems. Do not apply this product through any other type of irrigation system.
- Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water
- Apply in 0.1-0.25 inches of water per acre. Excessive water may reduce efficacy
- If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers, or other experts.
- Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.
- A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

Spray Preparation: Clean chemical tank and injector system thoroughly. Flush system with clean water.

Drip Irrigation: This product may be applied through drip irrigation systems for soil-borne disease control. The soil should have adequate moisture capacity prior to drip application.

Terminate drip irrigation at fungicide depletion from the main feed supply tank or after 6 hours from start, whichever is shorter. For maximum efficacy, delay subsequent irrigation (water only) for at least 24 hours following drip application.

Sprinkler Irrigation

Apply this product through sprinkler irrigation systems including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move. Apply with center pivot or continuous-move equipment distributing 1/2 acre-inch or less during treatment. In general, use the least amount of water required for proper distribution and coverage. If stationary systems (solid set, handlines or wheel lines other than continuous-move) are used, inject this product into no more than the last 20-30 minutes of the set.

Do not apply when winds are greater than 10-15 mph to avoid drift or wind skips. Do not apply when wind speed favors drift beyond the area intended for treatment.

Plant injury, lack of effectiveness, or illegal pesticide residues in the crop may result from non-uniformly treated water. Thorough coverage of foliage is required for good control. Good agitation should be maintained during the entire application period.

If you have questions about calibration, contact your State Extension Service specialist, equipment manufacturer or other experts.

Operating Instructions:

1. Do not apply when wind speed favors drift beyond the area intended for treatment.
2. The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water-source contamination from backflow.
3. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
4. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
5. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
6. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
7. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
8. Allow sufficient time for pesticide to be flushed through all lines and all nozzles before turning off irrigation water. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

9. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

Center Pivot Irrigation Equipment

Notes: (1) Use only with drive systems which provide uniform water distribution. (2) Do not use end guns when applying this product through center pivot systems as it may result in non-uniform application.

- Determine the size of the area to be treated.
- Determine the time required to apply 1/8 to 1/2 inch of water over the area to be treated when the system and injection equipment are operated at normal pressures as specified by the equipment manufacturer. When applying this product through irrigation equipment use the lowest obtainable water volume while maintaining uniform distribution. Run the system at 80-95% of the manufacturer's rated capacity.
- Using water, determine the injection pump output when operated at normal line pressure.
- Determine the amount of product required to treat the area covered by the irrigation system.
- Add the required amount of product and sufficient water to meet the injection time requirements to the solution tank.
- Make sure the system is fully charged with water before starting injection of the spray solution. Time the injection to last at least as long as it takes to bring the system to full pressure.
- Maintain constant agitation of the spray solution during the injection period.
- Continue to operate the system until the spray solution has cleared the sprinkler head.

Solid Set, Hand Move, and Moving Wheel Irrigation Equipment

- Determine the acreage covered by the sprinklers.
- Fill injector solution tank with water and adjust flow rate to use the contents over a 20 to 30-minute interval. When applying this product through irrigation equipment, use the lowest obtainable water volume while maintaining uniform distribution.
- Determine the amount of product required to treat the area covered by the irrigation system.
- Add the required amount of product into the same quantity of water used to calibrate the injection period.
- Operate the system at the same pressure and time interval established during the calibration.
- Stop injection equipment after treatment is completed. Continue to operate the system until the spray solution has cleared the last sprinkler head.

Specific Instructions for Public Water Systems

1. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
2. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, back-flow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, discharge the water from the public water system into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.

3. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
4. The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
5. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. Do not apply when wind speed favors drift beyond the area intended for treatment.

SPECIFIC USE DIRECTIONS

TURF:

UPGRADE may be used for control of certain pathogens causing foliar, stem, and root diseases, including leaf and stem blights, leaf spots, patch diseases, mildews, anthracnose, fairy rings, molds, and rusts of turfgrass plants. UPGRADE may be used to control certain diseases on turf in golf courses, lawns and landscape areas around residential, institutional, public, commercial and industrial buildings, parks, recreational areas and athletic fields.

Integrated Pest (Disease) Management (IPM): Sound turf management resulting healthy, vigorous turf is the foundation of a good IPM program. Cultural practices such as proper choice of turf variety, nutrient-management, proper cutting height, thatch management, and proper watering, drainage, and moisture stress management should be integrated with the use of fungicides to increase turf vigor and reduce the susceptibility to disease, immunoassay detection kits and extension service diagnostic services can assist in the early and accurate identification of causal organisms and corresponding selection of the proper fungicide when required.

Resistance Management: Some turf disease pathogens are known to have developed resistance to products used repeatedly for their control. UPGRADE should be applied at full use rates in a tank mix or alternation program with other registered fungicides that have a different mode of action and to which pathogen resistance has not developed. Since UPGRADE is a strobilurin fungicide, avoid alternation with other strobilurins, such as kresoxim-methyl and trifloxystrobin. Do not apply more than two [2] sequential UPGRADE applications for Gray Leaf Spot and *Pythium* spp. control. For all other diseases when Gray Leaf Spot and *Pythium* spp. are not present, do not apply more than three sequential applications of UPGRADE.

DIRECTIONS FOR APPLICATION FOR TURF DISEASES

Application Directions: UPGRADE should be applied prior to disease development. Mix UPGRADE with the required amount of water and apply as a dilute spray application in 1 to 3 gals. of water per 1000 sq. ft. (44-132 gals./A). Repeat applications at specified intervals for as long as required.

For spot treatments, use **0.38** fl. oz. UPGRADE per 1 to 3 gals. of water. Do not apply more than **2.4** gals. product/acre/year (**7.1** fl. oz. product/1000 sq. ft./year). Applications may be made by ground only.

Dollar Spot: UPGRADE does not control dollar spot. During periods of dollar spot pressure, always mix UPGRADE with **Legend®**, **Spectro™**, **26/36®** or another dollar spot control fungicide. UPGRADE is compatible in tank mixes with many other fungicides that control dollar spot.

Target Diseases	Use Rate (fl. oz. product per 1000 sq. ft.)	Application Interval (days)	Remarks*
Anthracnose *(Colletotrichum graminicola)*	0.38-0.77	14-28	Use preventatively. Begin applications when conditions are favorable for disease infection, prior to disease symptom development.
Brown Patch *(Rhizoctonia solani)*	0.38-0.77	14-28	Apply when conditions are favorable for disease development.
Cool Weather Brown Patch Yellow Patch *(Rhizoctonia cerealis)*	0.77	28	Make one or two applications in fall or when conditions are favorable for disease development.

(continued)

Target Diseases	Use Rate (fl. oz. product per 1000 sq. ft.)	Application Interval (days)	Remarks*
Fairy Ring *(Lycoperdon* spp., *Agrocybe pediades, and Bovistra plumbea)*	0.77	28	For prevention in Cool season turf, initiate applications in the spring when root zone soil temperatures reach 55-60° F. Make a second application using a 28 day interval. Immediately after fungicide is applied, irrigate the area with sufficient water to move the active ingredient down into the crown and active root zone of the turf. The amount of water is dependent on the depth of the root zone. Do not use a wetting agent unless hydrophobic soil conditions exist. Fairy ring symptoms may take 2 to 3 weeks to disappear following application. Alternate with another fungicide with a different mode of action, such as Affirm®, Torque® or Prostar®. For hydrophobic areas, Use an appropriate wetting agent to effectively penetrate the hydrophobic zone commonly created with this disease.

(continued)

Target Diseases	Use Rate (fl. oz. product per 1000 sq. ft.)	Application Interval (days)	Remarks*
Fusarium Patch *(Microdochium nivale)*	0.38-0.77	14-28	Use preventatively. Begin applications when conditions are favorable for disease infection, prior to disease symptom development.
Gray Leaf Spot *(Pyricularia grisea)*	0.38-0.77	14-28	Begin applications before disease is present and continue applications while conditions are favorable for disease development.
Leaf Rust Stem Rust Stripe Rust *(Puccinia* spp.*)*	0.38-0.77	14-28	Begin applications when conditions are favorable for disease infection, prior to disease symptom development.
Leaf Spot *(Bipolaris sorokiniana)*	0.38-0.77	14-21	Apply when conditions are favorable for disease development.
Melting Out *(Drechslera poae)*	0.38-0.77	14-21	Apply when conditions are favorable for disease development.

(continued)

Target Diseases	Use Rate (fl. oz. product per 1000 sq. ft.)	Application Interval (days)	Remarks*
Necrotic Ring Spot *(Leptosphaeria korrae)*	0.77	14-28	Apply when conditions are favorable for disease development.
Pink Patch *(Limonomyses roseipellis)*	0.38-0.77	14-28	Apply when conditions are favorable for disease development.
Powdery Mildew *(Erysiphe graminis)*	0.38-0.77	14-28	Begin applications when conditions are favorable for disease infections prior todisease symptom development.
Pythium Blight Pythium Root Rot *(Pythium aphanidermatum, Pythium* spp.*)*	0.77	10-14	Use preventatively. Begin applications when conditions are favorable for disease infection, prior to disease symptom development. During periods of prolonged favorable conditions, treat on the 10 day application interval. For use on newly seeded as well as established turf.

(continued)

Target Diseases	Use Rate (fl. oz. product per 1000 sq. ft.)	Application Interval (days)	Remarks*
Red Thread *(Laetisaria fuciformis)*	0.38-0.77	14-28	Apply when conditions are favorable for disease development.
Rhizoctonia Large Patch *(Rhizoctonia solani)*	0.77	14-28	Make one or two applications in fall or when conditions are favorable for disease development.
Southern Blight *(Sclerotium rolfsii)*	0.38-0.77	14-28	Apply when conditions are favorable for disease development.

(continued)

Target Diseases	Use Rate (fl. oz. product per 1000 sq. ft.)	Application Interval (days)	Remarks*
Spring Dead Spot *(Leptosphaeria korrae)* or *(Gaeumannomyces graminis var. graminis)* or *(Ophiosphaerella herpotricha)*	0.77	14-28	Apply applications approximately when soil temps in the root zone reach 80°F or approximately two months prior to bermudagrass dormancy. Water application into root zone. 1/4" to 1/2" of irrigation directly after application is recommended. Reapply 14 to 28 days later. Tank mixing with other SDS products such as Torque may enhance control under severe disease pressure.
Snow Molds Gray Snow Mold, Typhula Blight *(Typhula incarnata)* Pink Snow Mold *(Microdochium nivale)*	0.77 - 1.35	single application	Make a single application of 0.77 - 1.35 fl. oz. in late fall just before snow cover. Tank mixing with other snow mold fungicides, such as Torque, 26/36, Legend, or Spectro may enhance control under severe disease pressure.

(continued)

Target Diseases	Use Rate (fl. oz. product per 1000 sq. ft.)	Application Interval (days)	Remarks*
Summer Patch *(Magnaporthe poae)*	0.38-0.77	14-28	Apply when conditions are favorable for disease development.
Take-all Patch *(Gaeumannomyces graminis var. avenae)*	0.77	28	Begin applications when conditions are favorable for disease infection, prior to disease symptom development. Make two applications, 28 days apart in the spring and two applications 28 days apart in the fall.
Zoysia Patch *(Rhizoctonia solani and/or Gaeumannomyces incrustana)*	0.38-0.77	14-28	Apply 1 or 2 applications approximately one month prior to zoysiagrass dormancy. Reapply 14 to 28 days later.

*Do not apply more than two sequential applications of UPGRADE for control of Gray Leaf Spot and *Pythium* spp. For all other diseases when Gray Leaf Spot and *Pythium* spp. are not present, do not apply more than three sequential applications of UPGRADE.

UPGRADE Rate Conversion Chart for Turf

Fl. Oz. Product Per 1000 Sq. Ft.	Fl. Oz. Product per Acre	Pints Product Per Acre
0.38	16.6	1.03
0.58	25.3	1.58
0.77	33.5	2.10
0.96	41.8	2.61
1.15	50.1	3.13
1.35	58.8	3.67

Small Volume Application - Amount of UPGRADE to Mix per Gallon for Turf Applications

UPGRADE Use Rate fl. oz./1000 sq. ft.	Amount UPGRADE per volume [milliliters]		
	1 gallons	3 gallons	5 gallons
0.38	11.2	33.6	56.0
0.58	17.2	51.6	86.0
0.77	22.8	68.4	114.0
0.96	28.4	85.2	142.0
1.15	34.0	102.0	170.0
1.35	39.9	119.7	199.5

ORNAMENTALS

UPGRADE is recommended for control of certain pathogens causing foliar, aerial, and root diseases, including leaf, tip, and flower blights, leaf spots, downy mildew, powdery mildew, anthracnose, and rusts of ornamental plants. UPGRADE may be used to control listed diseases of herbaceous, deciduous and evergreen ornamentals and listed vegetable seedlings and transplants grown in greenhouses, lath houses, hoop houses, high tunnel and shadehouses, and herbaceous, deciduous and evergreen ornamentals grown in field, container, nurseries, retail nurseries, and other residential and commercial landscape areas. Do not use this product for the production of edible crops or food.

Do not exceed 2.4 gallons product/crop acre/year or 8 applications/crop/year.

Do not exceed 600 gallons spray volume per acre for foliar applications.

Do not exceed 2 pints volume per square foot for drench and crown applications.

Integrated Pest (Disease) Management:

UPGRADE should be integrated into an overall disease management strategy that includes selection of varieties with disease tolerance, optimum plant populations, proper fertilization, winter and/or spring pruning, plant residue management and proper timing and placement of irrigation.

Resistance Management: Some ornamental disease pathogens are known to have developed resistance to fungicides used repeatedly for their control. UPGRADE should be applied in an alternation or tank mix program with other registered fungicides that have a different mode of action and to which pathogen resistance has not developed. Do not make more than two (2) sequential applications of UPGRADE before alternating with a fungicide of a different mode of action. Do not alternate UPGRADE with other FRAC 11 or strobilurin fungicides.

Application Directions: Apply UPGRADE as a broadcast or banded spray targeted at the foliage or crown of the plant. Apply to runoff in sufficient water to ensure complete coverage of the target plant. Good coverage and wetting of foliage is necessary for best control. Refer to the label for specific use directions for control of certain diseases. Repeat applications at specified intervals (plus alternations for resistance management) for as long as required. Applications may be made by ground only.

UPGRADE applications should begin prior to disease development and continue throughout the season at specified intervals following resistance management guidelines. UPGRADE works best when used as part of a preventative disease management program.

Use only surfactants approved for ornamental plants in combination with UPGRADE. Do not use silicone based products with Heritage Fungicide due to possible phytotoxicity. Always test tank mixes on a small group of representative plants prior to broad scale use.

Apply UPGRADE at use rates of 1.9-7.7 fluid ounces/100 gallons every 7-28 days (or as otherwise specified for a specific plant or disease). The addition of a non-silicone based wetter-sticker at the recommended use rate may enhance coverage on hard-to-wet plant foliage.

Under most conditions and for most diseases, apply 3.9-7.7 fluid ounces/100 gallons on a 7-14 day interval.

Under light to moderate disease pressure, use the lower rates (1.9-3.9 fl oz/100 gallons) on a 7-14 day interval or the higher rates (5.8-7.7 fl oz/100 gallons) on a longer 14-28 day interval.

Under environmental conditions which promote severe disease development, use the higher rates (5.8-7.7 fl oz/100 gallons) on a 7-14 day interval. Use of UPGRADE as a "rescue" (late curative or eradicant) treatment may not always result in satisfactory disease control.

In addition, do not tank mix UPGRADE with other fungicides, insecticides, herbicides, fertilizers, adjuvants, etc, unless local experience indicates that the tank mix is safe to ornamental plants.

Drench Application: UPGRADE may be applied to control soilborne, seedling, and crown diseases of production ornamentals (greenhouse, hoop house, lath house, shadehouse, and field or container grown) as a preventative, drench treatment prior to infection. Good coverage of the pre-infection area (root zone, root ball, crown, etc.) is necessary for satisfactory control. UPGRADE may be drench applied to container grown ornamentals using 0.39-1.7 fluid ounces/100 gallons of water. Apply 1-2 pints of the solution per square foot surface area on a 7-28 day interval. Apply drench prior to infection as healthy roots are necessary to optimize product uptake, systemic translocation and disease protection. For resistance management do not make more than three sequential drench applications of UPGRADE before alternating with a fungicide of a different mode of action. Caution should be taken before making application of UPGRADE as a drench to small bedding plants in the seedling/plug stage due to possible phytotoxicity. A limited quantity of plants should be tested prior to full-scale application.

Drip Irrigation: UPGRADE may be applied through drip irrigation systems to potted ornamentals or to bedded, field grown ornamentals for soil-borne disease control. Apply 3.9-30.8 fluid ounces UPGRADE per acre as a preventative disease application. The soil or potting media should have adequate moisture capacity prior to drip application. Terminate drip irrigation at fungicide depletion from the main feed supply tank or after 6 hours from start, whichever is shorter. For maximum efficacy, subsequent irrigation (water only) should be delayed for at least for 24 hours following drip application.

Ornamental Use Precautions

Do not apply UPGRADE to apple or cherry trees (Flowering, Yoshina variety) due to possible phytotoxicity. Furthermore, do not use spray equipment that has applied UPGRADE for use in these sensitive crops due to possible phytotoxicity from residue remaining in the sprayer. UPGRADE may be applied to certain varieties of crabapple for control of apple scab. UPGRADE has been shown to be safer when applied to the species and varieties listed in Table 4. However, due to the large number of genera, species, and varieties of crabapple, it is impossible to test every one for tolerance to UPGRADE. The professional user should conduct small scale testing to insure plant safety prior to broadscale commercial use on plant genera and species not listed on this label.

TABLE 1: Diseases Controlled: When used in accordance with the label directions, UPGRADE will provide control of the following diseases of ornamental plants:

Disease [Pathogen]	Use Rates and Specific Instructions [fluid ounces product per 100 gallons]
[1] CONIFER BLIGHTS Phomopsis Blight (Phomopsis juniperovora) Tip Blight (Sirococcus strobilinus)	1.9 – 7.7 fl oz every 7-28 days

(continued)

Disease [Pathogen]	Use Rates and Specific Instructions [fluid ounces product per 100 gallons]
[2] LEAF BLIGHTS/LEAF SPOTS Alternaria Leaf Spot (Alternaria spp.) Anthracnose (Colletotrichum spp., Elsinoe spp.)	1.9 – 7.7 fl oz every 7-28 days
Downy Mildew of Rose (Peronospora sparsa)	3.9 – 7.7 fl oz every 7-21 days during periods of active plant growth and prior to dormancy or severe infection.
Entomosporium Leaf Spot (Entomosporium mespili)	1.9 – 7.7 fl oz every 7-28 days
Iris Leaf Spot (Mycosphaerella macrospora)	3.9 – 7.7 fl oz every 7-28 days
Leaf spot (Cladosporium echinulatum)	1.9 – 7.7 fl oz every 7-28 days

(continued)

Disease [Pathogen]	Use Rates and Specific Instructions [fluid ounces product per 100 gallons]
Rose Blackspot (Diplocarpon rosea)	7.7-15.4 fl oz every 7-14 days. Under severe disease conditions or if disease is already present, UPGRADE may be tank mixed with other fungicides such as Protect, Legend, or 3336 for enhanced disease management. Do not exceed 46 fl oz/acre/application.
Myrothecium leaf spot (Myrothecium spp.)	3.9-7.7 fl oz every 7-21 days
Downy Mildew of bedding plants (Peronospora spp.)	1.9-7.7 fl oz every 7-28 days
Scab (Venturia inaequalis)	**For crabapples only, see Table 4 for tolerant species. Do not apply to apple trees.** 1.9 – 7.7 fl oz every 10-28 days.
Marrsonina Leaf Spot (Marsonina spp.)	1.9 – 7.7 fl oz 14-28 days.
Cercospora Leaf Spot (Cercospora sp.)	1.9 – 7.7 fl oz 7-28 days.

(continued)

Disease [Pathogen]	Use Rates and Specific Instructions [fluid ounces product per 100 gallons]
[3] POWDERY MILDEW Erysiphe pannosa, Erysiphe spp. Microsphaera azaleae Sphaerotheca pannosa	Preventative applications only. Do not make more than 2 sequential applications before rotating to another class of fungicide. 1.9 – 7.7 fl oz every 7-28 days
[4] RUSTS Needle Rust (Melampsora occidentalis) Phragmidium spp. Puccinia spp. Gymnosporagium spp.	1.9 – 7.7 fl oz every 7-28 days. Alternation with a DMI Class fungicide such as Torque can enhance disease management.
[5] FLOWER BLIGHTS Anthracnose (Collectotrichum spp., Elsinoe spp.)	1.9 – 7.7 fl oz every 7-28 days
Botrytis Blight (Botrytis cinerea)	For suppression only. 7.7-15.4 fl oz every 7-21 days. Do not exceed 46 fl oz/acre. Rotation or tank mixing with other fungicides such as Protect, Legend, Spectro, Affirm, or 3336 will enhance disease management.

(continued)

Disease [Pathogen]	Use Rates and Specific Instructions [fluid ounces product per 100 gallons]
[6] SHOOT/STEM DISEASES Aerial/Shoot Blight (Phytophthora spp.)	1.9-3.9 fl oz every 7-28 days
[7] SOILBORNE DISEASES [Directed Spray] Rhizoctonia solani Sclerotium rolfsii Fusarium spp.	Apply as a directed spray to the soil surface and lower stem and crown area of the plant.1.9 – 7.7 fl oz every 7-21 days.
[8] SOILBORNE DISEASES [Drench] Rhizoctonia solani Sclerotium rolfsii Fusarium spp.	0.39-1.7 fl oz [11-51 mL] Apply 1-2 pints of the solution per square foot surface area, every 7-28 days. See Ornamentals Section for additional drench directions.

PLANT SAFETY: UPGRADE has been shown to be safe when applied to the ornamental plants listed in Tables 2 and 3. However, due to the large number of genera, species and varieties of ornamental and nursery plants, it is impossible to test every one for tolerance to UPGRADE. Neither the manufacturer nor the seller has determined whether or not UPGRADE can be used safely on genera, species, or varieties of ornamental and nursery plants not specified on this label. The professional user should conduct small scale testing to insure plant safety prior to broad scale commercial use on plant genera and species not listed in this label. In addition, do not tank mix UPGRADE with other fungicides, insecticides, herbicides, fertilizer,

adjuvants, etc, unless local experience indicates that the tank mix is safe to ornamental plants.

Do not apply UPGRADE to certain apple, crabapple, or cherry trees due to possible phytotoxicity. Furthermore, do not use spray equipment that has applied UPGRADE for use in these sensitive crops due to possible phytotoxicity from residue remaining in the sprayer.

Tolerant Ornamental Plants: UPGRADE has been found to be safe when applied to the plants listed in Tables 2 and 3 when applied according to recommended application methods, rates, and timings.

TABLE 2: Tolerant Plants Listed by Botanical Name

BOTANICAL NAME	COMMON NAME	DISEASES
Abelia spp.	Abelia	2
Abies fraseri	Fraser fir	1,4
Abies procera	Noble Fir	1,4
Acer palmatum	Japanese maple	2
Acer saccharum	Sugar maple	2
Ageratum spp.	Floss-Flower	3,4
Ageratum spp.	Pussy's-Foot	3,4
Aglaonema spp.	Chinese evergreen	2,4
Ajuga reptans	Bugle, Bugleweed	3
Antirrhinum spp.	Snap-Dragon	2[DM],3,4
Aphelandra spp.	Zebra-Plant	2
Artemisia spp.	Mugwort, Sagebrush	2
Artemisia spp.	Wormwood	2
Aster spp.	Aster, Starwort	4

(continued)

BOTANICAL NAME	COMMON NAME	DISEASES
Aucuba japonica	Japanese aucuba, Japanese laurel	7
Begonia spp. (except Rieger begonia)	Begonia	2,3
Berberis thunbergii	Barberry	3,4
Betula nigra	River birch	3,4
Bougainvillea spp.	Bougainvillea	2
Brassaia actinophylla	Rubber-tree, Umbrella-tree	2,7
Buddleia davidii	Buddleia, Butterfly-bush	2
Buxus sempervirens	Boxwood	2,7 [Rhizoctonia]
Caladium spp.	Caladium	7
Camellia japonica	Camellia	2
Caryota urens	Sago Palm	2,7
Catharanthus roseus	Vinca	2
Ceanothus sanguineus	Wild lilac	3
Ceanothus spp.	Ceanothus, California lilac, Snowball	3
Cedrus atlantica	Atlas cedar	2,4
Cedrus spp.	White cedar	2,4
Cercis occidentalis	Western redbud	2
Chamaecyparis spp.	Cypress, Leyland cypress	1

(continued)

BOTANICAL NAME	COMMON NAME	DISEASES
Chamaecyparis pisifera	Sawara cypress	1
Chamaedora elegans	Parlor palm	7
Chrysanthemum spp.	Chrysanthemums	2, 7 [Fusarium]
Clethra alnifolia	Clethra, White alder	2
Cornus spp.	Dogwood, Pink dogwood, Flowering dogwood	2[Anthracnose],3
Cornus florida	Dogwood	2 [Anthracnose],3
Cortaderia selloana	Pampas grass	3
Cotoneaster adpressus	Creeping Cotoneaster	7
Cotoneaster horizontalis	Cotoneaster – variegated rockspray	7
Cyclamen spp.	Cyclamen	7 [Fusarium]
Cyperus spp.	Cyperus	1
Delphinium spp.	Larkspur	2
Dianthus caryophyllus	Carnation	3,4
Dianthus spp.	Pink	3,4
Dieffenbachia spp.	Oumb-Cane	2
Dietes iridiodes	African iris, Butterfly iris	4 [Puccinia]
Digitalis spp.	Foxglove	2,3
Epipremnum spp.	Pothos	2
Erica dareyensis	Heather	2
Euonymus alata	Dwarf winged euonymus	2

(continued)

BOTANICAL NAME	COMMON NAME	DISEASES
Euonymus alatus	Burning bush	2
Euonymus japonica	Evergreen euonymus	2
Euphorbia spp.	Poinsettia	2 [Alternaria]
Fatsia japonica	Japanese fatsia, Paper-plant	2
Ficus spp.	Fig	2
Forsythia viridissima	Forsythia	2
Gaillardia spp.	Blanket-Flower	2
Gardenia jasminoides	Gardenia	3
Geranium spp.	Cranesbill	5 [Botrytis]
Gerbera jamesonii	Gerber daisy, Transvaal daisy	3
Hedera algeriensis	Algerian ivy	2
Hedera helix	English ivy	2
Hibiscus moscheutos	Hibiscus	2,3
Hibiscus rosa-sinensis	Hibiscus	2,3
Hibiscus syriacus	Rose of Sharon	2,3
Hosta spp.	Hosta	2
Hydrangea macrophylla	French hydrangea	2,3
Hydrangea spp.	Hydrangea	2,3
Ilex spp.	Holly, Winterberry, Yaupon	3
Impatiens spp.[1]	Balsam, Impatiens [1]	2 [Alternaria], 7 [Rhizoctonia

(continued)

BOTANICAL NAME	COMMON NAME	DISEASES
Iris xiphium	Iris (bulbous, Spanish, Dutch)	2 [Iris Leaf Spot]
Itea virginica	Virginia willow	3,4
Juniperus procumbens	Juniper	1 [Phomopsis], 4
Juniperus scopulorum	Juniper	1 [Phomopsis], 4
Juniperus spp.	Juniper	1 [Phomopsis],4
Juniperus virginiana	Red cedar	1 [Phomopsis],4
Lagerstroemia indica	Crapemyrtle	2,3
Laurus nobilis	Laurel	3
Lilium spp.	Asiatic Lily	2
Liriope muscari	Lily-turf	2
Lobulaha maritime	Sweet alyssum	7
Magnolia grand/flora	Southern magnolia	2
Magnolia soulangiana	Saucer magnolia	2
Magnolia spp.	Magnolia	2
Malus spp.	Crabapple (See Table 4 for variety list)	2 [Scab]
Nandina domestica	Nandina	2
Nerium oleander	Oleander, Rose-bay	2
Pelargonium spp.	Geranium	3, 4, 5 [Botrytis]
Pennisetum alopecuroides	Grass	2
Peperomia spp.	Baby rubber-plant	2,7
Petunia spp.	Petunia	6
Phalaris spp.	Dwarf pampas grass	3

(continued)

BOTANICAL NAME	COMMON NAME	DISEASES
Philodendron spp.	Philodendron	2
Phlox spp.	Phlox	3
Phoenix dactylifera	Date palm	2,7
Phoenix roebelenii	Roebelin's palm	2,7
Photinia glabra	Red-tip photinia	2,3,4
Picea abies	Norway spruce	1
Picea glauca	White spruce	1
Picea pungens	Blue spruce	1
Pieris japonica	Japanese Andromeda	2,7
Pinus muhgo	Muhgo pine	1 [Tip Blight], 4
Pinus nigra	Black pine	1 [Tip Blight, 4
Pinus silvestris	Scotch pine	1,4
Pinus spp.	Pine	1 [Tip Blight],4
Pinus stobus	Eastern white pine	1 [Tip Blight],4
Pittosporum spp.	Australian laurel	3,4
Pittosporum tobira	Mock-orange	3,4
Plectranthus spp.	Swedish ivy, Coleus	2
Populus trichocarpa	Poplar	4
Populus spp.	Aspen Trees	2
Potentilla spp.	Cinquefoil	2
Primula spp.	Primrose	2
Prunus pumila	Cherry	2,5
Prunus spp.	Flowering plum, Purple-leaf plum	2,5
Pseudotsuga spp.	Douglas fir	1,4

(continued)

BOTANICAL NAME	COMMON NAME	DISEASES
Pyrus calleryana	Bradford's pear	3
Quercus rubra	Red oak	2,3
Quercus palustris	Pin oak	2,3
Rhaphiolepsis indica	Indian hawthorn	2,3,4
Rhododendron spp.	Azaleas, Rhododendron	2[Anthracnose],3,6,7
Rhododendron spp.	Glacier Azalea	2[Anthracnose],3,6,7
Rosa spp.	Rose	2 [Alternaria, Downy Mildew, 3 [Sphaerotheca], 4 [Phragmidium]
Rosmarinus spp.	Rosemary (prostrate)	2
Rudbeckia hirta	Black-eyed-susan	2
Salvia spp.	Sage	3,4
Schlumbergera	Holiday cactus	2,7
Sedum spp.	Orpine, Stonecrop	2
Sempervivum spp.	Live-forever, House-Leek	2
Setaria spp.	Ribbon-grass	2,3
Spathiphyllum floribundium	Peace lily	2,7
Spirea budalda	Spirea	3
Spirea japonica	Spirea	3
Syagrus romanzoffianum	Queen palm	2

(continued)

BOTANICAL NAME	COMMON NAME	DISEASES
Tagetes spp.	Marigold	2 [Alternaria]
Taxus baccata	Spreading yew	7
Thuja plicata	Western Red Cedar	4
Thujopsis spp.	Arborvitae	2
Thymus serphyllum	Creeping thyme	2
Tsuga heterophylla	Western Hemlock	4
Tsuga spp.	Hemlock	4
Verbena spp.	Verbena, Vervain	3
Viburnum spp.	Viburnum	2,3,4
Vinca spp.	Periwinkle	2,6
Viola spp. [1]	Viola, Pansy [1]	2
Wiegela florida	Pink wiegela	2
Yucca spp.	Yucca	7
Zinnia spp.	Zinni	2 [Alternaria],3

Footnotes: [1] Do not exceed 3.9 fl oz/100 gallons on indicated species

TABLE 3: Tolerant Varieties of Crabapple and Other Malus Species

Arkansas Black	Doubloons	Mary Potter	Sentinel
M.atrosanguinea	Eleyi	Molten Lava	Silver Moon
M. baccata	Enterprise	New Centennial	Silverdrift
M. baccata var. jackii	Evereste	Ormiston Roy	Sinai Fire
	Eyelynn	Pink Satin	*M. spectablis*
M. baccata var. mandshurica	*M. floribunda*	Prairie Maid	Sugar Tyme
	Gloriosa	Prairifire	Van Eseltine
Callaway	Golden Delicious	Profusion	White Angel
Candymint	Golden Raindrops	*M. pumila*	Williams Pride
Sargent		Ralph Shay	Winter Gold
Christmas Holly	Hopa	Red Jade	Yellow Delicious
M. coronaria	Indian Magic	Red Baron	*M. zumi Calocarpa*
David	Island	Sargent	
Dolgo	Katherine	*M. sargentii*	
Donald Wyman	Lancelot	*M. seiboldii*	
Dorothea	Louisa	Selkirk	

TABLE 4: Intolerant Plants – **Do Not Apply UPGRADE to these species or varieties.**

COMMON NAME	BOTANICAL NAME
Apple	*Malus domestica*
Crabapple - Flame variety	*Malus spp.*
Crabapple - Brandywine variety	*Malus spp.*
Crabapple - Novamac variety	*Malus spp.*
Cherry, Flowering - Yoshina variety	*Prunus yedoensis*
Leatherleaf Fern and Other Ferns for cut foliage	*Rumohra adianformis* and other species for cut foliage
Privet	*Ligustrum spp.*

Conifers including Christmas Trees
UPGRADE may be used to control certain diseases on conifers in production (indoor and outdoor) and landscape situations. Please see the Ornamental Section above for more detailed directions for use in landscape situations.

Target Disease	Use Rate fluid ounces product/A (lb a.i/A)	Application Directions
Diplodia tip blight *(Diplodia pinea)* Lophodermium needlecast *(Lophodermium pinastri)* Swiss needlecast *(Phaeocrytopus gaumannii)*	6.2-15.4 (0.1-0.25)	Begin applications prior to disease development and continue throughout the season at 7-21-day intervals following the resistance management guidelines. Apply by ground, air, or chemigation. An adjuvant may be added at label specified rates. Do not make more than two (2) sequential applications of this product or other Group 11 fungicides before alternating with a fungicide that has a different mode of action.
Specific Use Restrictions: Do not exceed 1 gallon of this product/Acre per season.		

COMMERCIAL PRODUCTION ROSES

Target Disease	Use Rate fluid ounces product/A (lb a.i/A)	Application Directions
Downy Mildew *(Peronospora sparsa)* Powdery Mildew *(Spherotheca pannosa)* Rust *(Phragmidium mucronatum, P. tuberculatum, and other Phragmidium spp.* Septoria Leaf Spot *(Septoria rosea)* Alternaria Leaf Spot *(Alternaria alternata)*	3.1-15.4 (0.05-0.25)	Heritage application should begin prior to disease development and continue throughout the season on 7-21 day intervals following the resistance management guidelines. Applications may be made by ground, air or chemigation. An adjuvant may be added at recommended rates. Do not make more than 4 sequential applications of Upgrade before alternating with a fungicide that is not in Group 11. Do not make more than 8 applications per acre per year.
Specific Use Restrictions: Do not exceed 1 gallon of this product/Acre per season.		

BRASSICA - LEAFY GREENS Subgroup 5B

Broccoli Raab; Chinese Cabbage (bok choy); Collards; Kale; Mizuna; Mustard Greens; Mustard Spinach; Rape Greens; all Cultivars and/or Hybrids of these

Target Disease	Use Rate fl oz product/A (lb a.i/A)	Application Directions
Black spot *(Alternaria spp.)* Cercospora leaf spot *(Cercospora spp.)* White rust *(Albugo candida)*	6.0-15.5 (0.10-0.25)	Begin applications prior to disease development and continue throughout the season at 7- to 14-day intervals following the resistance management guidelines. Apply by ground, air, or chemigation. An adjuvant may be added at label specified rates. Do not make more than one application of this product or other Group 11 fungicides before alternating with a fungicide that has a different mode of action.
Soilborne Diseases Seedling Root Rot, Basal Stem Rot *(Rhizoctonia solani)*	0.40-0.80 fl oz/1000 row ft	For soilborne/seedling disease control, see directions and rates under **SOILBORNE/SEEDLING DISEASE CONTROL** section.

Use Limitations:
Do not exceed 46 fl oz of this product/Acre per season.
Do not exceed the equivalent of 0.75 lb a.i./Acre per season from any azoxystrobin-containing products.
Pre-harvest Interval (PHI) = 0 Day.

CUCURBIT VEGETABLES, Crop Group 9

Cantaloupe; Chayote; Chinese-Waxgourd; Cucumber; Gourds; Honeydew Melon; *Momordica* spp. (bitter melon, balsam apple); Muskmelon; Watermelon; Pumpkin; Squash; Zucchini; Varieties, Cultivars and/or Hybrids of these

Target Disease	Use Rate fl oz product/A (lb a.i/A)	Application Directions
Anthracnose *(Colletotrichum lagenarium)* Belly rot *(Rhizoctonia solani)* Downy mildew *(Pseudoperonospora cubensis)* Gummy stem blight *(Didymella bryoniae)* Leaf spots *(Alternaria* spp., *Cercospora* spp.*)* Myrothecium canker *(Myrothecium roridum)*	6.0-15.5 (0.10-0.25)	For downy mildew and powdery mildew, make preventative applications at 5- to 7-day intervals. For belly rot control, make the first application at the 1-3 leaf crop stage with a second application just before vines tip over or 10-14 days later, whichever occurs first. For all other diseases, begin applications prior to disease development and continue throughout the season at 7- to 14-day intervals following the resistance management guidelines. Apply by ground, air, or chemigation. An adjuvant may be added at label specified rates.

(continued)

Target Disease	Use Rate fl oz product/A (lb a.i/A)	Application Directions
Plectosporium blight *(Plectosporium tabacinum)* Powdery Mildew *(Sphaerotheca fuliginea), (Erysiphe cichoracearum)* Ulocladium Leaf Spot *(Ulocladium cucurbitae)*	6.0-15.5 (0.10-0.25)	Do not tank mix this product with crop oil concentrates (COC), methylated spray oil (MSO) or silicon adjuvants. Do not tank mix this product with malathion, Kelthane®, Thiodan®, Phaser®, Lannate®, Lorsban®, M-Pede® or Botran®. Do not make more than one application of this product or other Group 11 fungicides before alternating with a fungicide that has a different mode of action. Do not make more than four (4) foliar applications of this product or other Group 11 fungicides per crop per acre per year.
Soilborne diseases Rhizoctonia root rot *(Rhizoctonia solani)*	0.4-0.8 fl oz/ 1000 row ft	For soilborne/seedling disease control, see directions and rates under **SOILBORNE/SEEDLING DISEASE CONTROL** section.
Use Limitations: Do not exceed 92.3 fl oz of this product/Acre per season. Do not exceed the equivalent of 1.5 lb a.i./Acre per season from any azoxystrobin-containing products. Pre-harvest Interval (PHI) = 1 Day.		

FRUITING VEGETABLES – PEPPER / EGGPLANT Subgroup 8-10B *

African Eggplant; Bell Pepper; Eggplant; Martynia; Nonbell Pepper; Okra; Pea Eggplant; Pepino; Roselle; Scarlet Eggplant; Cultivars, Varieties, and/or Hybrids of these

***For use on tomatoes, see crop specific Application Directions for Tomato Subgroup 8-10A**

Target Disease	Use Rate fl oz product/A (lb a.i/A)	Application Directions
Anthracnose *(Colletotrichum* spp.) Powdery Mildew *(Sphaerotheca* spp.)	6.0-15.5 (0.10-0.25)	Begin applications prior to disease development and continue throughout the season at 7- to 14-day intervals following the resistance management guidelines. Apply by ground, air, or chemigation. An adjuvant may be added at label specified rates. Do not make more than one application of this product or other Group 11 fungicides before alternating with a fungicide that has a different mode of action.
Soilborne diseases Rhizoctonia seedling rot *(Rhizoctonia solani)*	0.4-0.8 fl oz/ 1000 row ft	For soilborne/seedling disease control, see directions and rates under **SOILBORNE/SEEDLING DISEASE CONTROL** section.
Use Limitations: Do not exceed 61.5 fl oz of this product/Acre per season. Do not exceed the equivalent of 1.0 lb a.i./Acre per season from any azoxystrobin-containing products. Pre-harvest Interval (PHI) = 0 Day.		

HERBS & SPICES (Except Black Pepper), Crop Group 19

Allspice; Angelica; Anise (seed); Anise (star); Annatto (seed); Balm; Basil; Borage; Burnet; Camomile; Caper (buds); caraway; Caraway (black); cardamom; Cassia Bark; Cassia Buds; Catnip; Celery Seed; Chervil (dried); Chinese Chive; Chive; Cinnamon; Clary; Clove Buds; Coriander Leaf (cilantro or Chinese parsley); Coriander Seed (cilantro); Costmary; Culantro (leaf); Culantro (seed); Cumin; Curry (leaf); Dill (dillweed); Dill (seed); Fennel (common); Florence Fennel (seed); Fenugreek; Grains of Paradise; Horehound; Hyssop; Juniper Berry; Lavender; Lemongrass; Lovage (leaf); Lovage (seed); Mace; Marigold; Marjoram; Mustard (seed); Nasturtium; Nutmeg; Parsley (dried); Pennyroyal; Pepper (black and white); Poppy (seed); Rosemary; Rue; Saffron; Sage; Savory (summer and winter); Sweet Bay; Tansy; Tarragon; Thyme; Vanilla; Wasabi, Wintergreen; Woodruff; Wormwood

Target Disease	Use Rate fl oz product/A (lb a.i/A)	Application Directions
Corynespora blight *(Corynespora cassiicola)* Dill blight *(Cercosporidiurn punctum)* Phoma blight *(Passalora puncta)*	6.0-15.5 (0.10-0.25)	Begin applications at the onset of disease development and continue throughout the season at 7-day intervals following the resistance management guidelines. Apply by ground only. An adjuvant may be added at label specified rates. Use a minimum of 30 gallons of water per acre. Do not make more than two (2) sequential applications of this product or other Group 11 fungicides before alternating with a fungicide that has a different mode of action.

(continued)

Target Disease	Use Rate fl oz product/A (lb a.i/A)	Application Directions
Fusarium Rhizome and Root Rot *(Pythium* spp.)	6.2-15.4 (0.10-0.25)	**For Wasabi only:** Begin applications at the onset of disease development and continue throughout the season at 7-day intervals following the resistance management guidelines, Apply by ground or chemigation. An adjuvant may be added at label specified rates. Use a minimum of 30 gallons of water per acre. Do not make more than two (2) sequential applications of this product or other Group 11 fungicides before alternating with a fungicide that has a different mode of action.
Use Limitations: Do not exceed 92.3 fl oz of this product/Acre per season. Do not exceed the equivalent of 1.5 lb a.i./Acre per season from any azoxystrobin-containing products. Pre-harvest Interval (PHI) = 0 Day.		

LEAFY VEGETABLES (Except Brassica)

Amaranth, Arugula, Cardoon, Celery, Celtuce, Chervil, Chrysanthemum (edible), Corn salad, Cress, Dandelion, Dock, Endive, Fennel, Lettuce (head and leaf), Orach, Parsley, Purslane, Radicchio, Rhubarb, Spinach, Swiss Chard, Cultivars, Varieties, and/or Hybrids of these

Target Disease	Use Rate fl oz product/A (lb a.i/A)	Application Directions
Foliar Diseases Alternaria leaf spot *(Alternaria sonchi, A. spp.)* Anthracnose *(Microdochium panattonianum, Colletotrichum dematium)* Cercospora leaf spot *(Cercospora spp.)* Septoria leaf spot *(Septoria petroselini)* White rust *(Albugo occidentalis)*	6.0-15.5 (0.10-0.25)	For downy and powdery mildew, make preventative applications at 5- to 7-day intervals. For all other diseases, begin applications prior to disease development and continue throughout the season at 7- to 14-day intervals following the resistance management guidelines. Apply by ground, air, or chemigation. An adjuvant may be added at label specified rates. Do not make more than one application of this product or other Group 11 fungicides before alternating with a fungicide that has a different mode of action.

(continued)

Target Disease	Use Rate fl oz product/A (lb a.i/A)	Application Directions
Downy mildew *(Bremia lactucae)* Powdery mildew *(Eyrisiphe cichoracearum)*	12.0-15.5 (0.20-0.25)	**ATTENTION** Applications of this product to leafy vegetable foliage may contribute to foliar phytotoxicity under certain circumstances. Proceed with caution with regard to tank mixes and adjuvants when treating any leafy vegetable crops with this product. When treating leaf lettuce, do not tank mix this product with AMBUSH® WP, Pounce® WP, Aliette®, Warrior® with Zeon™ Technology, or any other product that may increase the penetration of this product into the leaf surface such as, but not limited to, silicone wetters.
Soilborne Diseases Web blight, Bottom rot, Crater rot, Root rot *(Rhizoctonia solani)*	0.4-0.8fl oz/ 1000 row ft	For soilborne/seedling disease control, see directions and rates under **SOILBORNE/SEEDLING DISEASE CONTROL** section.
Use Limitations: Do not exceed 92.3 fl oz of this product/Acre per season. Do not exceed the equivalent of 1.5 lb a.i./Acre per season from any azoxystrobin-containing products. Pre-harvest Interval (PHI) = 0 Day.		

TOMATO Subgroup 8-10A

Bush Tomato; Cocona; Currant Tomato; Garden Huckleberry; Goji Berry; Groundcherry; Naranjilla; Sunberry; Tomatillo; Tomato; Tree Tomato; Cultivars, Varieties, and/or Hybrids of these

Target Disease	Use Rate fl oz product/A (lb a.i/A)	Application Directions
Anthracnose *(Colletotrichum coccodes)* Black mold *(Alternaria alternata)* Buckeye rot *(Phytophthora spp.)* Early blight *(Alternaria solani)* Powdery Mildew *(Oidiopsis sicula)* Septoria Leaf Spot *(Septoria lycopersici)* Target spot *(Corynespora cassiicola)*	5.0-6.2 (0.08-0.10)	Begin applications prior to disease development and continue throughout the season following the resistance management guidelines. Apply by ground, air, or chemigation. For late blight, apply this product at 5- to 7- day intervals. For all other tomato diseases, make applications at 7- to 21-day intervals. Use of adjuvants may result in severe phytotoxicity. Do not exceed 0.125% adjuvant (v/v). Thank mixtures with dimethoate may cause phytotoxicity. For fresh market tomatoes, do not use adjuvants or tank mix this product with other pesticides formulated as emulsifiable concentrates (EC).

(continued)

Target Disease	Use Rate fl oz product/A (lb a.i/A)	Application Directions
Late Blight *(Phytophthora infestans)*	6.2 (0.10)	Do not make more than one application of this product or other Group 11 fungicides before alternating with a fungicide that has a different mode of action.

Use Limitations:
Do not exceed 37 fl oz of product/Acre per season.
Do not exceed the equivalent of 0.6 lb a.i./Acre per season from any azoxystrobin-containing productPre-harvest Interval (PHI) = 0 Day.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage and disposal.

PESTICIDE STORAGE: Store in original containers only. Keep container closed when not in use. Do not store near food or feed. In case of spill on floor or paved surfaces, mop and remove to chemical waste storage area until proper disposal can be made if product cannot be used according to the label.

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative of the nearest EPA Regional Office for guidance.

(continued)

STORAGE AND DISPOSAL *(continued)*

CONTAINER HANDLING:

Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. **Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke.

WARRANTY DISCLAIMER

The directions for use of this product must be followed carefully. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, (1) THE GOODS DELIVERED TO YOU ARE FURNISHED "AS IS" BY MANUFACTURER OR SELLER AND (2) MANUFACTURER AND SELLER MAKE NO WARRANTIES, GUARANTEES, OR REPRESENTATIONS OF ANY KIND TO BUYER OR USER, EITHER EXPRESS OR IMPLIED, OR BY USAGE OF TRADE, STATUTORY OR OTHERWISE, WITH REGARD TO THE PRODUCT SOLD, INCLUDING, BUT NOT LIMITED TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, USE, OR ELIGIBILITY OF THE PRODUCT FOR ANY PARTICULAR TRADE USAGE. UNINTENDED CONSEQUENCES, INCLUDING BUT NOT LIMITED TO INEFFECTIVENESS, MAY RESULT BECAUSE OF SUCH FACTORS AS THE PRESENCE OR ABSENCE OF OTHER MATERIALS USED IN COMBINATION WITH THE GOODS, OR THE MANNER OF USE OR APPLICATION, INCLUDING WEATHER, ALL OF WHICH ARE BEYOND THE

CONTROL OF MANUFACTURER OR SELLER AND ASSUMED BY BUYER OR USER. THIS WRITING CONTAINS ALL OF THE REPRESENTATIONS AND AGREEMENTS BETWEEN BUYER, MANUFACTURER AND SELLER, AND NO PERSON OR AGENT OF MANUFACTURER OR SELLER HAS ANY AUTHORITY TO MAKE ANY REPRESENTATION OR WARRANTY OR AGREEMENT RELATING IN ANY WAY TO THESE GOODS.

LIMITATION OF LIABILITY

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, IN NO EVENT SHALL MANUFACTURER OR SELLER BE LIABLE FOR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, OR FOR DAMAGES IN THEIR NATURE OF PENALTIES RELATING TO THE GOODS SOLD, INCLUDING USE, APPLICATION, HANDLING, AND DISPOSAL. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, MANUFACTURER OR SELLER SHALL NOT BE LIABLE TO BUYER OR USER BY WAY OF INDEMNIFICATION TO BUYER OR TO CUSTOMERS OF BUYER, IF ANY, OR FOR ANY DAMAGES OR SUMS OF MONEY, CLAIMS OR DEMANDS WHATSOEVER, RESULTING FROM OR BY REASON OF, OR RISING OUT OF THE MISUSE, OR FAILURE TO FOLLOW LABEL WARNINGS OR INSTRUCTIONS FOR USE, OF THE GOODS SOLD BY MANUFACTURER OR SELLER TO BUYER. ALL SUCH RISKS SHALL BE ASSUMED BY THE BUYER, USER, OR ITS CUSTOMERS. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BUYER'S OR USER'S EXCLUSIVE REMEDY, AND MANUFACTURER'S OR SELLER'S TOTAL LIABILITY SHALL BE FOR DAMAGES NOT EXCEEDING THE COST OF THE PRODUCT.

If you do not agree with or do not accept any of the directions for use, the warranty disclaimers, or limitations of liability, do not use the product and return it unopened to the Seller, and the purchase price will be refunded.

(RV030714)

Group 11 Fungicide

UPGRADE™

Fungicide

Broad spectrum fungicide for the control of turf and ornamental plant disease and listed vegetable seedlings and transplants

ACTIVE INGREDIENT

Azoxystrobin (methyl (E)-2-{2-[6-(2-cyanophenoxy) pyrimidin-4-yloxy]-phenyl}-3-methoxyacrylate	22.9%
OTHER INGREDIENTS	77.1%
TOTAL	100.0%

Contains 2.04 pounds of active ingredient per gallon

KEEP OUT OF REACH OF CHILDREN.

CAUTION / PRECAUCIÓN

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.
(If you do not understand the label, find someone to explain it to you in detail.)

SEE ATTACHED BOOKLET FOR PRECAUTIONARY STATEMENTS, DIRECTIONS FOR USE, AND STORAGE AND DISPOSAL STATEMENTS.

For Chemical Spill, Leak, Fire, or Exposure, Call CHEMTREC (800) 424-9300.
For Medical Emergencies Only, Call (877) 325-1840.

FIRST AID	
IF ON SKIN OR CLOTHING	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.

HOTLINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact (877) 325-1840 for emergency medical treatment information.

Net Contents: 1 Qt. (946 mL)

EPA Reg. No. 228-724
EPA Est. No. 35935-NZL-001

Manufactured for Nufarm Americas Inc.
11901 S. Austin Avenue I Alsip, IL 60803

PULL HERE TO OPEN

(RV030714)


3336® EG
Turf and Ornamental Systemic Fungicide
Commercial Product, General Use:
For Turf and Ornamental Applications
KEEP OUT OF REACH OF CHILDREN
CAUTION
Cleary
AN EXCLUSIVE LINE FROM
Nufarm
Net Weight: 5 Lbs. (2.27 Kg)
3336® EG
3336® EG
17317000
3336® EG
Please contact your distributor or Cleary Chemical for a product label if it is not attached here. Always read and follow label instructions.
American Packaging Corp.
ARTWORK APPROVAL FORM

Material to be added to an e-Jacket/Jacket

Reg. # 228-[redacted]724 Decision # 439879

Description:

_____

_____

☐ Material(s) Sent to Data Extraction Contractors:

- ☐ Stamped Label Dated _____
- ☐ Notification Dated _____
- ☐ New CSF(s) Dated _____
- ☐ Other: _____

☒ E-Stamping: Letter/label added to N: drive folder

☐ Other Action/Comments: _____

_____

File this coversheet and attached materials in the jacket. It must be well organized and clipped together, NOT STAPLED. Then give the jacket with the coversheet and materials to staff in the Information Services Center (ISC) (Room S-4900). If a jacket is full or only available as an image, please file materials in a new jacket and bring it down to the (ISC). For further information please call 703-605-0716.

Reviewer: SHill Division: RD

Phone: 703-347-8961 Date: 5/6/14

Created May 5, 2014

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF
CHEMICAL SAFETY AND
POLLUTION PREVENTION

MAY 0 2 2014

Carrie Tackema
Nufarm America Inc.
11901 S. Austin Avenue
Alsip, IL 60803

Subject: Upgrade Fungicide
EPA Reg. No.: 228-724
Your Notification dated: April 9, 2014
OPP Decision No.: 490150

Dear Ms. Tackema,

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action(s) requested fall within the scope of PRN 98-10.

The Agency acknowledges the inclusion of the marketing claims "Nufarm Grow a better tomorrow" and "Grow a better tomorrow". The label submitted with the application has been stamped "Notification" and will be placed in our records.

If you have questions concerning this letter, please contact Shaunta Hill at 703-347-8961 or via email at hill.shaunta@epa.gov.

Sincerely,

X Shaja B Joyner

Shaja B. Joyner
Product Manager 20
Signed by: Joyner, Shaja

EPA	United States Environmental Protection Agency Washington, DC 20460	☐ Registration ☐ Amendment ☒ Other:	OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number	2. EPA Product Manager	3. Proposed Classification
228-724	Shaja Joyner	☒ None ☐ Restricted
4. Company/Product (Name) UPGRADE Fungicide	PM# 20	
5. Name and Address of Applicant *(Include ZIP Code)* **Nufarm Americas Inc. 11901 S. Austin Avenue Alsip, IL 60803** ***Please send all correspondence to "contact point" listed below***	6. **Expedited Review**. In accordance with FIFRA Section 3(c)(3) (b)(I), my product is similar or identical in composition and labeling to: EPA Reg. No.: _____ Product Name: _____	

Section - II

☐ Amendment – Explain below.
☐ Resubmission in response to Agency letter dated _____
☒ Notification - Explain below.
☐ Final printed labels in response to Agency letter dated _____
☒ "Me Too" Application
☐ Other - Explain below

Explanation: Use additional page(s) if necessary. (For Section I and Section II.)

NOTIFICATION PER PRN 98-10

This notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR 152.46, and no other changes have been made to the labeling or the confidential statement of formula of this product. I understand that it is a violation of 18 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA.

CONTACT: **Carrie M. Tackema (919) 379-2528 or carrie.tackema@us.nufarm.com**
4020 Aerial Center Parkway, Suite 101
Morrisville, NC 27560

Section - III

1. Material This Product Will Be Packaged In:

Child-Resistant Packaging	Unit Packaging	Water Soluble Packaging	2. Type of Container
☐ Yes* ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Metal ☒ Plastic ☐ Glass ☐ Paper ☐ Other (Specify)
***Certification must be submitted**	If "Yes" Unit Packaging wgt. / No. per container	If "Yes" Package wgt. / No. per container	

3. Location of Net Contents Information	4. Size(s) Retail Container	5. Location of Label Directions
☒ Label ☐ Container	1 Qt - Bulk	☒ On Label ☐ On labeling accompanying product

6. Manner in Which Label is Affixed to Product ☐ Lithograph ☒ Paper glued ☐ Stenciled ☐ Other _____

Section - IV

1. Contact Point *(Complete items directly below for identification of individual to be contacted, if necessary, to process this application)*

Name	Title	Telephone No. (Include Area Code)
Carrie M. Tackema	**Regulatory Manager**	**919-379-2528**

Certification

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

2. Signature	3. Title	6. Date Application Received (Stamped)
	Regulatory Manager	
4. Typed Name **Carrie M. Tackema**	4. Date **April 9, 2014**	

4/14

Nufarm

+1 919.379.2510
+1 919.467.5923
4020 Aerial Center Parkway, Suite 101
Morrisville, NC 27560
www.nufarm.com

Via Courier Delivery

April 9, 2014

Ms. Shaja Joyner, PM#20
Document Processing Desk (NOTIF)
Office of Pesticide Programs (7504P)
U. S. Environmental Protection Agency
Room S-4900, One Potomac Yard
2777 S. Crystal Drive
Arlington, VA 22202-4501

RE: ***UPGRADE Fungicide***
EPA Reg. No. 228-724
NOTIFICATION per PRN 98-10

Dear Ms. Joyner:

Enclosed please find an application for pesticide registration – NOTIFICATION for the above-referenced product. The purpose of this NOTIFICATION is to include two (2) optional marketing claims:

Nufarm Grow a better tomorrow
Grow a better tomorrow

This NOTIFICATION is consistent with PRN 98-10; specifically, II N. In support of this NOTIFICATION enclosed are the following:

- EPA form 9570-1 Application for Pesticide Registration – NOTIFICATION;
- Label certification; and
- Proposed product labeling in PDF format on CD-rom.

Please contact me at directly at (919) 379-2528 or by email at carrie.tackema@us.nufarm.com if you have any questions regarding this action.

Sincerely,

Carrie M. Tackema
Regulatory Manager

Enclosure(s)

NOTIFICATION
05/02/2014

Group 11 Fungicide

UPGRADE™ Fungicide

Broad spectrum fungicide for the control of turf and ornamental plant disease and listed vegetable seedlings and transplants

ACTIVE INGREDIENT	
Azoxystrobin (methyl (E)-2-{2-[6-(2-cyanophenoxy)pyrimidin-4-yloxy]-phenyl}-3-methoxyacrylate	22.9%
OTHER INGREDIENTS	77.1%
TOTAL	100.0%

Contains 2.04 pounds of active ingredient per gallon

KEEP OUT OF REACH OF CHILDREN.

CAUTION / PRECAUTIÓN

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.
(If you do not understand the label, find someone to explain it to you in detail.)

SEE LABEL BOOKLET FOR FIRST AID AND PRECAUTIONARY STATEMENTS

EPA REG. NO. 228-724

EPA Est. No. _____

MANUFACTURED FOR
NUFARM AMERICAS INC.
11901 S. AUSTIN AVENUE
ALSIP, IL 60803

NET CONTENTS: _____ (Gal.) (_____ liters)

[Designation as "NONREFILLABLE" or "REFILLABLE" for containers > 5 GAL]
[Nufarm Grow a better tomorrow]
[Grow a better tomorrow]

000228-00724.040914.draft.NOTIF

FIRST AID	
IF ON SKIN OR CLOTHING	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
HOTLINE NUMBER Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact (877) 325-1840 for emergency medical treatment information.	

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION / PRECAUCTIÓN

Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing.

PERSONAL PROTECTIVE EQUIPMENT (PPE)
Some materials that are chemically resistant to this product are listed below. If you want more options follow the instructions for Category A on an EPA chemical resistance category selection chart.

Applicators and other handlers must wear:
- Long-sleeved shirt and long pants
- Chemical resistant gloves made of any waterproof material such as polyvinyl chloride, nitrile rubber or butyl rubber.
- Shoes plus socks

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions exist for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Controls
When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240 (d)(4-6), the handler PPE requirements may be reduced or modified as specified in the WPS.

IMPORTANT: When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for "applicators and other handlers" and have such PPE immediately available for use in an emergency, such as a spill or equipment breakdown.

USER SAFETY RECOMMENDATIONS

Users should:
- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Wash thoroughly with soap and water after handling.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to freshwater and estuarine/marine fish and aquatic invertebrates. Do not apply directly to water except as specified on this label. For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwater or rinsate.

The active ingredient, azoxystrobin, in this product can be persistent for several months or longer. Azoxystrobin has degradation products which have properties similar to chemicals which are known to leach through soil to ground water under certain conditions as a result of agricultural use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.

Notify State and/or Federal authorities and Nufarm immediately if you observe any adverse environmental effects due to use of this product.

PHYSICAL OR CHEMICAL HAZARDS

Do not mix or allow coming in contact with oxidizing agent. Hazardous chemical reaction may occur.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

FAILURE TO FOLLOW THE USE DIRECTIONS AND PRECAUTIONS ON THIS LABEL MAY RESULT IN PLANT INJURY OR POOR DISEASE CONTROL

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), notification to workers, and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water is:

- Coveralls
- Chemical resistant gloves made of any waterproof material such as polyvinyl chloride, nitrile rubber or butyl rubber
- Shoes plus socks

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box only apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Do not treat areas while unprotected humans or domestic animals are present in the treatment areas. Because certain states may require more restrictive reentry intervals, consult your State Department of Agriculture for further information.

Turf and Landscape Uses: Do not enter or allow others to enter the treated area until sprays have dried.

PRODUCT INFORMATION

This product is a suspension concentrate (SC) or flowable formulation. It is a broad spectrum, preventive fungicide with systemic and curative properties recommended for the control of many important plant diseases. This product may also improve the yield and/or quality of the crop. These additional benefits are due to positive effects on plant physiology. The effects may vary according to factors such as the crop, crop hybrid, or environment. This product may be applied as a foliar spray in alternating spray programs or in tank mixes with other registered crop protection products. Make all applications according to the use directions on this label.

USE PRECAUTIONS AND LIMITATIONS

Some phytotoxicity may be observed when applying tank mixtures of this product with emulsifiable concentrate (EC) formulations. These effects may be enhanced if applications are made under cool, cloudy conditions and these conditions remain for several days following application. In addition, adjuvants that contain some forms of silicone may also contribute to phytotoxicity.

ATTENTION

This product is extremely phytotoxic to certain apple varieties.

AVOID SPRAY DRIFT. Extreme care must be used to prevent injury to apple trees (and apple fruit). Refer to SPRAY DRIFT MANAGEMENT information below.

DO NOT spray this product where spray drift may reach apple trees.

DO NOT spray apple trees with spray equipment previously used to apply this product. Even trace amounts of product may cause unacceptable phytotoxicity to certain apple and crabapple varieties.

SPRAY DRIFT MANAGEMENT

The interaction of many equipment and weather related factors determine the potential for spray drift.

DO NOT spray when conditions favor drift beyond the area intended for application. Conditions which may contribute to drift include thermal inversion, wind speed and direction, sprayer nozzle/pressure combinations, spray droplet size, etc. Contact your State Extension agent for spray drift prevention guidelines in your area.

DO NOT apply when weather conditions favor drift from treated areas to non-target aquatic habitat.

AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR.

INTEGRATED PEST MANAGEMENT (IPM)

To reduce the potential for development of resistance, integrate this product into an overall disease and pest management strategy whenever the use of a fungicide is required. Follow cultural practices known to reduce disease development such as selection of disease-tolerant varieties, removal of plant debris in which inoculum overwinters, and proper timing and placement of irrigation. Consult with your State Agricultural Experiment Station or Extension Service specialist for additional IPM strategies established for your area. This product may be used in State Agricultural Extension advisory (disease forecasting) programs which recommend application timing based on environmental factors favorable for disease development.

Crop Tolerance: Plant tolerance has been found to be acceptable for all crops on the label. However, not all possible tank mixture combinations have been tested under all conditions. It is recommended to test tank mixture combinations on a small portion of the crop to assess plant response before large scale applications. See the USE PRECAUTIONS AND LIMITATIONS section for apple phytotoxicity information.

RESISTANCE MANAGEMENT

This product is a Group 11 fungicide. The mode of action for azoxystrobin, the active ingredient in this product, is the inhibition of the Qol (quinone outside) site within the electron transport system as well as disruption of membrane synthesis by blocking demethylation [Group 11]. Fungal pathogens can develop resistance to products with the same mode of action when used repeatedly. Because resistance development cannot be predicted, use this product in accordance with resistance management strategies established for the crop and use area. Consult your local or State agricultural authorities for resistance management strategies that are complementary to those in this label. Resistance management strategies may include alternating and/or tank-mixing with products having different modes of action or limiting the total number of applications per season. Nufarm Americas Inc. encourages responsible resistance management to ensure effective long-term control of the fungal diseases on this label with Group 11 (Qol) fungicides.

Follow the crop specific resistance management recommendations provided in the directions for use.

If no resistance recommendation on number of applications is specified in the directions for use, follow the recommendations in the table below.

If planned total number of fungicide applications per crop is:	1	2	3	4	5	6	7	8	9	10	11	12
Recommended Solo Qol fungicide sprays	1	1	2	2	2	2	2	3	3	3	3	4
Recommended Qol fungicide sprays in mixture (tank-mix or formulated)	1	2	2	2	2	3	3	4	4	5	5	6

Under conditions requiring multiple fungicide applications, develop season long spray programs for Group 11 (QoI) fungicides. In crops where two sequential Group 11 fungicide applications are made, alternating with two or more applications of a fungicide that is not in Group 11 will help reduce the potential for resistance development. If more than 12 applications are made, observe the following guidelines:

- When a QoI fungicide is used as a solo product, make no more than 1/3 (33%) of the total number of fungicide applications per season with the QoI containing product.
- For programs including tank mixes or premixes of QoI fungicide with mixing partners of a different mode of action, the number of QoI containing applications must represent no more than 1/2 (50%) of the total number of fungicide applications per season.
- In programs including applications of QoI fungicides as both solo products and mixtures, the number of QoI containing applications must represent no more than 1/2 (50%) of the total number of fungicide applications per season.

If a Group 11 fungicide is applied to the seed or soil, do not make another application with a Group 11 fungicide for at least 3 weeks.

SOIL BORNE/SEEDLING DISEASE CONTROL

For crops that have specific use directions for soil borne disease control:

This product can provide control of many soil borne diseases if applied early in the growing season. Specific applications for soil borne diseases include in-furrow applications and banded applications applied over the row, either shortly after plant emergence or during herbicide applications or cultivation. These applications will provide control of pre- or postemergence damping off and diseases that infect plants at the soil-plant interface.

The use of either type of application depends on the regional cultural practices. In some locations, one type of application may provide better disease control than the other, depending on the timing of the disease epidemic. Seedling diseases are generally controlled by in-furrow applications while banded applications are more effective against soil borne diseases that develop later in the season. Consult your local expert to get some guidance regarding application type.

Under cool, wet conditions, crop injury from soil directed applications can occur.

Drip

Refer to the **Instructions for Use through Irrigation Systems (Chemigation) section.**

PRODUCT USE INSTRUCTIONS

Application: Thorough coverage is necessary to provide good disease control. Make no more spray solution than is needed for application. Avoid spray overlap, as crop injury may occur.

Adjuvants: The use of an adjuvant may improve consistency and performance of this product. Refer to crop specific directions for use for information regarding the use of adjuvants.

Efficacy: Under certain conditions conducive to extended infection periods, use another registered fungicide for additional applications once the maximum amount of this product has been used. If resistant isolates to Group 11 fungicides are present, product performance may be reduced for certain diseases. When heavy infection pressure exists, when treating varieties highly susceptible to disease, or when environmental conditions are conducive to disease development, best results are obtained when using the higher rates and/or the shorter spray intervals allowed in the crop specific use directions on this label..

MIXING AND APPLICATION INSTRUCTIONS

Spray Equipment

All types of spray equipment commonly used for ground and aerial applications may be used with this product. Proper adjustment and calibration of spraying equipment to give good canopy penetration and coverage is essential for good disease control.

Nozzles

- Equip sprayers with nozzles that provide accurate and uniform application.
- Use nozzles that are the same size and uniformly spaced across the boom.
- Calibrate sprayer before use.
- Use screens to protect the pump and to prevent nozzles from clogging.
- Use screens 16-mesh or coarser on the suction side of the pump.
- Do not place a screen in the recirculation line.
- Use 50-mesh or coarser screens between the pump and boom, and where required, at the nozzles.

- Check nozzle manufacturer's use guidelines.

Pump

- Use a pump with capacity to:
  a) Maintain 35 to 40 psi at nozzles.
  b) Provide sufficient agitation in tank to keep mixture in suspension. This requires recirculation of 10% of tank volume per minute.
- Use a jet agitator or liquid sparge tube for agitation.
- Do not air sparge.

For more information on spray equipment and calibration, consult sprayer manufacturers and state agricultural agency for advice. For specific local directions and spray schedules, consult your state agricultural agency for advice.

Spray Solution Preparation

- Proper mixing of this product with water requires use of a spray tank equipped with agitation.
- Prepare only the amount of spray solution required for immediate use. Do not allow spray mixture *to* stand overnight or for prolonged periods.
- Thoroughly clean spray equipment before preparing the spray solution.
- Maintain constant agitation throughout the spraying operation.
- Rinse spray tank thoroughly with clean water after each day's use and dispose of pesticide rinsate by application to an already treated area

Stand-alone product solution:

- Add ½ to ⅔ of the required amount of water to a spray or mixing tank and begin agitation.
- Add the specified amount of this product to the tank.
- Continue agitation while adding the remainder of the water and allow time for good dispersion.
- Begin application of the spray solution after the product has completely dispersed in the mix water and maintain agitation during spraying.

Tank mixture with other products:

- Add ½ to ⅔ of the required amount of water to a spray or mixing tank and begin agitation.
- Add tank mix partners to the tank in the following order: 1) wettable powder and water dispersible granule (WDG) formulations, 2) liquid flowables (aqueous suspensions), and 3) emulsifiable concentrates.
- Allow the material to completely dissolve and disperse into the mix water.
- Continue agitation while adding the remainder of the water and this product to the tank mix and allow time for good dispersion
- Begin application of the spray mixture while maintaining agitation.

Compatibility

This product is compatible with many pesticides and additives commonly used in tank mixtures. To determine the physical compatibility of this product with other products prior to full scale use, conduct a jar test as follows: Using a quart jar, add the proportionate amounts of the tank mixture components to 1 qt. of water. Add wettable powders and water dispersible granule (WDG) products first, then liquid flowables, and emulsifiable concentrates last. Mix thoroughly and let stand for at least 5 minutes. If the combination remains mixed or can be remixed readily, it is physically compatible. Once compatibility has been confirmed, use the same procedure for adding required ingredients to the spray tank.

NOTE: Some phytotoxicity may be observed when applying tank mixtures of this product with emulsifiable concentrate (EC) formulations. These effects may be enhanced if applications are made under cool, cloudy conditions and these conditions remain for several days following application. In addition, adjuvants that contain some forms of silicone may also contribute to phytotoxicity.

INSTRUCTIONS FOR USE THROUGH IRRIGATION SYSTEMS (CHEMIGATION)

- Use only on crops for which chemigation is specified on this label.
- Apply this product through 1) sprinkler irrigation systems including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move; 2) drip irrigation systems. Do not apply this product through any other type of irrigation system.
- Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water
- Apply in 0.1-0.25 inches of water per acre. Excessive water may reduce efficacy

- If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers, or other experts.
- Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.
- A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

Spray Preparation: Clean chemical tank and injector system thoroughly. Flush system with clean water.

Drip Irrigation: This product may be applied through drip irrigation systems for soil-borne disease control. The soil should have adequate moisture capacity prior to drip application.

Terminate drip irrigation at fungicide depletion from the main feed supply tank or after 6 hours from start, whichever is shorter. For maximum efficacy, delay subsequent irrigation (water only) for at least 24 hours following drip application.

Sprinkler Irrigation

Apply this product through sprinkler irrigation systems including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move. Apply with center pivot or continuous-move equipment distributing 1/2 acre-inch or less during treatment. In general, use the least amount of water required for proper distribution and coverage. If stationary systems (solid set, handlines or wheel lines other than continuous-move) are used, inject this product into no more than the last 20-30 minutes of the set.

Do not apply when winds are greater than 10-15 mph to avoid drift or wind skips. Do not apply when wind speed favors drift beyond the area intended for treatment.

Plant injury, lack of effectiveness, or illegal pesticide residues in the crop may result from non-uniformly treated water. Thorough coverage of foliage is required for good control. Good agitation should be maintained during the entire application period.

If you have questions about calibration, contact your State Extension Service specialist, equipment manufacturer or other experts.

Operating Instructions:

1. Do not apply when wind speed favors drift beyond the area intended for treatment.
2. The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water-source contamination from backflow.
3. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
4. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
5. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
6. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
7. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
8. Allow sufficient time for pesticide to be flushed through all lines and all nozzles before turning off irrigation water. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.
9. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

Center Pivot Irrigation Equipment

Notes: (1) Use only with drive systems which provide uniform water distribution. (2) Do not use end guns when applying this product through center pivot systems as it may result in non-uniform application.

- Determine the size of the area to be treated.
- Determine the time required to apply 1/8 to 1/2 inch of water over the area to be treated when the system and injection equipment are operated at normal pressures as specified by the equipment manufacturer. When applying this product through irrigation equipment use the lowest obtainable water volume while maintaining uniform distribution. Run the system at 80-95% of the manufacturer's rated capacity.
- Using water, determine the injection pump output when operated at normal line pressure.
- Determine the amount of product required to treat the area covered by the irrigation system.
- Add the required amount of product and sufficient water to meet the injection time requirements to the solution tank.
- Make sure the system is fully charged with water before starting injection of the spray solution. Time the injection to last at least as long as it takes to bring the system to full pressure.
- Maintain constant agitation of the spray solution during the injection period.
- Continue to operate the system until the spray solution has cleared the sprinkler head.

Solid Set, Hand Move, and Moving Wheel Irrigation Equipment

- Determine the acreage covered by the sprinklers.
- Fill injector solution tank with water and adjust flow rate to use the contents over a 20 to 30-minute interval. When applying this product through irrigation equipment, use the lowest obtainable water volume while maintaining uniform distribution.
- Determine the amount of product required to treat the area covered by the irrigation system.
- Add the required amount of product into the same quantity of water used to calibrate the injection period.
- Operate the system at the same pressure and time interval established during the calibration.
- Stop injection equipment after treatment is completed. Continue to operate the system until the spray solution has cleared the last sprinkler head.

Specific Instructions for Public Water Systems

1. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
2. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, back-flow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, discharge the water from the public water system into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
3. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
4. The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
5. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. Do not apply when wind speed favors drift beyond the area intended for treatment.

SPECIFIC USE DIRECTIONS

TURF:
UPGRADE may be used for control of certain pathogens causing foliar, stem, and root diseases, including leaf and stem blights, leaf spots, patch diseases, mildews, anthracnose, fairy rings, molds, and rusts of turfgrass plants. UPGRADE may be used to control certain diseases on turf in golf courses, lawns and landscape areas around residential, institutional, public, commercial and industrial buildings, parks, recreational areas and athletic fields.

Integrated Pest (Disease) Management (IPM): Sound turf management resulting healthy, vigorous turf is the foundation of a good IPM program. Cultural practices such as proper choice of turf variety, nutrient-management, proper cutting height, thatch management, and proper watering, drainage, and moisture stress management should be integrated with the use of fungicides to increase turf vigor and reduce the susceptibility to disease, immunoassay detection kits and extension service diagnostic services can assist in the early and accurate identification of causal organisms and corresponding selection of the proper fungicide when required.

Resistance Management: Some turf disease pathogens are known to have developed resistance to products used repeatedly for their control. UPGRADE should be applied at full use rates in a tank mix or alternation program with other registered fungicides that have a different mode of action and to which pathogen resistance has not developed. Since UPGRADE is a strobilurin fungicide, avoid alternation with other strobilurins, such as kresoxim-methyl and trifloxystrobin. Do not apply more than two [2] sequential UPGRADE applications for Gray Leaf Spot and *Pythium spp.* control. For all other diseases when Gray Leaf Spot and *Pythium spp.* are not present, do not apply more than three sequential applications of UPGRADE.

DIRECTIONS FOR APPLICATION FOR TURF DISEASES

Application Directions: UPGRADE should be applied prior to disease development. Mix UPGRADE with the required amount of water and apply as a dilute spray application in 1 to 3 gals. of water per 1000 sq. ft. (44-132 gals./A). Repeat applications at specified intervals for as long as required. For spot treatments, use **0.38** fl. oz. UPGRADE per 1 to 3 gals. of water. Do not apply more than **2.4** gals. product/acre/year (**7.1** fl. oz. product/1000 sq. ft./year). Applications may be made by ground only.

Dollar Spot: UPGRADE does not control dollar spot. During periods of dollar spot pressure, always mix UPGRADE with **Legend®**, **Spectro™**, **26/36®** or another dollar spot control fungicide. UPGRADE is compatible in tank mixes with many other fungicides that control dollar spot.

Target Diseases	Use Rate (fl. oz. product per 1000 sq. ft.)	Application Interval (days)	Remarks*
Anthracnose *(Colletotrichum graminicola)*	0.38-0.77	14-28	Use preventatively. Begin applications when conditions are favorable for disease infection, prior to disease symptom development.
Brown Patch *(Rhizoctonia solani*	0.38-0.77	14-28	Apply when conditions are favorable for disease development.
Cool Weather Brown Patch Yellow Patch *(Rhizoctonia cerealis)*	0.77	28	Make one or two applications in fall or when conditions are favorable for disease development.

Fairy Ring *(Lycoperdon* spp., *Agrocybe pediades, and* *Bovistra plumbea)*	0.77	28	For prevention in Cool season turf, initiate applications in the spring when root zone soil temperatures reach 55-60° F. Make a second application using a 28day interval. Immediately after fungicide is applied, irrigate the area with sufficient water to move the active ingredient down into the crown and active root zone of the turf. The amount of water is dependent on the depth of the root zone. Do not use a wetting agent unless hydrophobic soil conditions exist. Fairy ring symptoms may take 2 to 3 weeks to disappear following application. Alternate with another fungicide with a different mode of action, such as Affirm®, Torque® or Prostar®. For hydrophobic areas, Use an appropriate wetting agent to effectively penetrate the hydrophobic zone commonly created with this disease.
Fusarium Patch *(Microdochium nivale)*	0.38-0.77	14-28	Use preventatively. Begin applications when conditions are favorable for disease infection, prior to disease symptom development.
Gray Leaf Spot *(Pyricularia grisea)*	0.38-0.77	14-28	Begin applications before disease is present and continue applications while conditions are favorable for disease development.
Leaf Rust Stem Rust Stripe Rust *(Puccinia* spp.)	0.38-0.77	14-28	Begin applications when conditions are favorable for disease infection, prior to disease symptom development.
Leaf Spot *(Bipolaris sorokiniana)*	0.38-0.77	14-21	Apply when conditions are favorable for disease development.
Melting Out *(Drechslera poae)*	0.38-0.77	14-21	Apply when conditions are favorable for disease development
Necrotic Ring Spot *(Leptosphaeria korrae)*	0.77	14-28	Apply when conditions are favorable for disease development.
Pink Patch *(Limonomyses roseipellis)*	0.38-0.77	14-28	Apply when conditions are favorable for disease development.
Powdery Mildew *(Erysiphe graminis)*	0.38-0.77	14-28	Begin applications when conditions are favorable for disease infections prior to disease symptom development.
Pythium Blight Pythium Root Rot *(Pythium aphanidermatum, Pythium* spp.)	0.77	10-14	Use preventatively. Begin applications when conditions are favorable for disease infection, prior to disease symptom development. During periods of prolonged favorable conditions, treat on the 10 day application interval. For use on newly seeded as well as established turf.
Red Thread *(Laetisaria fuciformis)*	0.38-0.77	14-28	Apply when conditions are favorable for disease development.
Rhizoctonia Large Patch *(Rhizoctonia solani)*	0.77	14-28	Make one or two applications in fall or when conditions are favorable for disease development.
Southern Blight *(Sclerotium rolfsii)*	0.38-0.77	14-28	Apply when conditions are favorable for disease development.
Spring Dead Spot *(Leptosphaeria korrae)* or *(Gaeumannomyces graminis var. graminis)* or *(Ophiosphaerella herpotricha)*	0.77	14-28	Apply applications approximately when soil temps in the root zone reach 80°F or approximately two months prior to bermudagrass dormancy. Water application into root zone. 1/4" to 1/2" of irrigation directly after application is recommended. Reapply 14 to 28 days later. Tank mixing with other SDS products such as Torque may enhance control under severe disease pressure.

Snow Molds Gray Snow Mold, Typhula Blight *(Typhula incarnata)* Pink Snow Mold *(Microdochium nivale)*	0.77 - 1.35	single application	Make a single application of 0.77 - 1.35 fl. oz. in late fall just before snow cover. Tank mixing with other snow mold fungicides, such as Torque, 26/36, Legend, or Spectro may enhance control under severe disease pressure.
Summer Patch *(Magnaporthe poae)*	0.38-0.77	14-28	Apply when conditions are favorable for disease development.
Take-all Patch *(Gaeumannomyces graminis var. avenae)*	0.77	28	Begin applications when conditions are favorable for disease infection, prior to disease symptom development. Make two applications, 28 days apart in the spring and two applications 28 days apart in the fall.
Zoysia Patch *(Rhizoctonia solani and/or Gaeumannomyces incrustana)*	0.38-0.77	14-28	Apply 1 or 2 applications approximately one month prior to zoysiagrass dormancy. Reapply 14 to 28 days later.

*Do not apply more than two sequential applications of UPGRADE for control of Gray Leaf Spot and *Pythium* spp. For all other diseases when Gray Leaf Spot and *Pythium* spp. are not present, do not apply more than three sequential applications of UPGRADE.

UPGRADE Rate Conversion Chart for Turf

Fl. Oz. Product Per 1000 Sq. Ft.	Fl. Oz. Product per Acre	Pints Product Per Acre
0.38	16.6	1.03
0.58	25.3	1.58
0.77	33.5	2.10
0.96	41.8	2.61
1.15	50.1	3.13
1.35	58.8	3.67

Small Volume Application - Amount of UPGRADE to Mix per Gallon for Turf Applications

UPGRADE Use Rate fl. oz./1000 sq. ft.	Amount UPGRADE per volume [milliliters]		
	1 gallons	3 gallons	5 gallons
0.38	11.2	33.6	56.0
0.58	17.2	51.6	86.0
0.77	22.8	68.4	114.0
0.96	28.4	85.2	142.0
1.15	34.0	102.0	170.0
1.35	39.9	119.7	199.5

ORNAMENTALS

UPGRADE is recommended for control of certain pathogens causing foliar, aerial, and root diseases, including leaf, tip, and flower blights, leaf spots, downy mildew, powdery mildew, anthracnose, and rusts of ornamental plants. UPGRADE may be used to control listed diseases of herbaceous, deciduous and evergreen ornamentals and listed vegetable seedlings and transplants grown in greenhouses, lath houses, hoop houses, high tunnel and shadehouses, and herbaceous, deciduous and evergreen ornamentals grown in field, container, nurseries, retail nurseries, and other residential and commercial landscape areas. Do not use this product for the production of edible crops or food.

Do not exceed 2.4 gallons product/crop acre/year or 8 applications/crop/year.
Do not exceed 600 gallons spray volume per acre for foliar applications.
Do not exceed 2 pints volume per square foot for drench and crown applications,

Integrated Pest (Disease) Management:
UPGRADE should be integrated into an overall disease management strategy that includes selection of varieties with disease tolerance, optimum plant populations, proper fertilization, winter and/or spring pruning, plant residue management and proper timing and placement of irrigation.

Resistance Management: Some ornamental disease pathogens are known to have developed resistance to fungicides used repeatedly for their control. UPGRADE should be applied in an alternation or tank mix program with other registered fungicides that have a different mode of action and to which pathogen resistance has not developed. Do not make more than two (2) sequential applications of UPGRADE before alternating with a fungicide of a different mode of action. Do not alternate UPGRADE with other FRAC 11 or strobilurin fungicides.

Application Directions: Apply UPGRADE as a broadcast or banded spray targeted at the foliage or crown of the plant. Apply to runoff in sufficient water to ensure complete coverage of the target plant. Good coverage and wetting of foliage is necessary for best control. Refer to the label for specific use directions for control of certain diseases. Repeat applications at specified intervals (plus alternations for resistance management) for as long as required. Applications may be made by ground only.

UPGRADE applications should begin prior to disease development and continue throughout the season at specified intervals following resistance management guidelines. UPGRADE works best when used as part of a preventative disease management program.

Use only surfactants approved for ornamental plants in combination with UPGRADE. Do not use silicone based products with Heritage Fungicide due to possible phytotoxicity. Always test tank mixes on a small group of representative plants prior to broad scale use.

Apply UPGRADE at use rates of 1.9-7.7 fluid ounces/100 gallons every 7-28 days (or as otherwise specified for a specific plant or disease). The addition of a non-silicone based wetter-sticker at the recommended use rate may enhance coverage on hard-to-wet plant foliage.

Under most conditions and for most diseases, apply 3.9-7.7 fluid ounces/ 100 gallons on a 7-14 day interval.

Under light to moderate disease pressure, use the lower rates (1.9-3.9 fl oz/100 gallons) on a 7-14 day interval or the higher rates (5.8-7.7 fl oz/100 gallons) on a longer 14-28 day interval.

Under environmental conditions which promote severe disease development, use the higher rates (5.8-7.7 fl oz/100 gallons) on a 7-14 day interval. Use of UPGRADE as a "rescue" (late curative or eradicant) treatment may not always result in satisfactory disease control.

In addition, do not tank mix UPGRADE with other fungicides, insecticides, herbicides, fertilizers, adjuvants, etc, unless local experience indicates that the tank mix is safe to ornamental plants.

Drench Application: UPGRADE may be applied to control soilborne, seedling, and crown diseases of production ornamentals (greenhouse, hoop house, lath house, shadehouse, and field or container grown) as a preventative, drench treatment prior to infection. Good coverage of the pre-infection area (root zone, root ball, crown, etc.) is necessary for satisfactory control. UPGRADE may be drench applied to container grown ornamentals using 0.39-1.7 fluid ounces/100 gallons of water. Apply 1-2 pints of the solution per square foot surface area on a 7-28 day interval. Apply drench prior to infection as healthy roots are necessary to optimize product uptake, systemic translocation and disease protection. For resistance management do not make more than three sequential drench applications of UPGRADE before alternating with a fungicide of a different mode of action. Caution should be taken before making application of UPGRADE as a drench to small bedding plants in the seedling/plug stage due to possible phytotoxicity. A limited quantity of plants should be tested prior to full-scale application.

Drip Irrigation: UPGRADE may be applied through drip irrigation systems to potted ornamentals or to bedded, field grown ornamentals for soil-borne disease control. Apply 3.9-30.8 fluid ounces UPGRADE per acre as a preventative disease application. The soil or potting media should have adequate moisture capacity prior to drip application. Terminate drip irrigation at fungicide depletion from the main feed supply tank or after 6 hours from start, whichever is shorter. For maximum efficacy, subsequent irrigation (water only) should be delayed for at least for 24 hours following drip application.

Ornamental Use Precautions
Do not apply UPGRADE to apple or cherry trees (Flowering, Yoshina variety) due to possible phytotoxicity. Furthermore, do not use spray equipment that has applied UPGRADE for use in these sensitive crops due to possible phytotoxicity from residue remaining in the sprayer. UPGRADE may be applied to certain varieties of crabapple for control of apple scab. UPGRADE has been shown to be safer when applied to the species and varieties listed in Table 4. However, due to the large number of genera, species, and varieties of crabapple, it is impossible to test every one for tolerance to UPGRADE. The professional user should conduct small scale testing to insure plant safety prior to broadscale commercial use on plant genera and species not listed on this label.

TABLE 1: Diseases Controlled: When used in accordance with the label directions, UPGRADE will provide control of the following diseases of ornamental plants:

Disease [Pathogen]	Use Rates and Specific Instructions [fluid ounces product per 100 gallons]
[1] CONIFER BLIGHTS Phomopsis Blight (Phomopsis juniperovora) Tip Blight (Sirococcus strobilinus)	1.9 – 7.7 fl oz every 7-28 days
[2] LEAF BLIGHTS/LEAF SPOTS Alternaria Leaf Spot (Alternaria spp.) Anthracnose (Colletotrichum spp., Elsinoe spp.)	1.9 – 7.7 fl oz every 7-28 days
Downy Mildew of Rose (Peronospora sparsa)	3.9 – 7.7 fl oz every 7-21 days during periods of active plant growth and prior to dormancy or severe infection.
Entomosporium Leaf Spot (Entomosporium mespili)	1.9 – 7.7 fl oz every 7-28 days
Iris Leaf Spot (Mycosphaerella macrospora)	3.9 – 7.7 fl oz every 7-28 days
Leaf spot (Cladosporium echinulatum)	1.9 – 7.7 fl oz every 7-28 days
Rose Blackspot (Diplocarpon rosea)	7.7-15.4 fl oz every 7-14 days. Under severe disease conditions or if disease is already present, UPGRADE may be tank mixed with other fungicides such as Protect, Legend, or 3336 for enhanced disease management. Do not exceed 46 fl oz/acre/application.
Myrothecium leaf spot (Myrothecium spp.)	3.9-7.7 fl oz every 7-21 days
Downy Mildew of bedding plants (Peronospora spp.)	1.9-7.7 fl oz every 7-28 days
Scab (Venturia inaequalis)	**For crabapples only, see Table 4 for tolerant species. Do not apply to apple trees.** 1.9 – 7.7 fl oz every 10-28 days.
Marrsonina Leaf Spot (Marsonina spp.)	1.9 – 7.7 fl oz 14-28 days.
Cercospora Leaf Spot (Cercospora sp.)	1.9 – 7.7 fl oz 7-28 days.
[3] POWDERY MILDEW Erysiphe pannosa, Erysiphe spp. Microsphaera azaleae Sphaerotheca pannosa	Preventative applications only. Do not make more than 2 sequential applications before rotating to another class of fungicide. 1.9 – 7.7 fl oz every 7-28 days
[4] RUSTS Needle Rust (Melampsora occidentalis) Phragmidium spp. Pucciniaspp. Gymnosporagium spp.	1.9 – 7.7 fl oz every 7-28 days. Alternation with a DMI Class fungicide such as Torque can enhance disease management.
[5] FLOWER BLIGHTS Anthracnose (Collectotrichum spp., Elsinoe spp.)	1.9 – 7.7 fl oz every 7-28 days

Botrytis Blight (Botrytis cinerea)	For suppression only. 7.7-15.4 fl oz every 7-21 days. Do not exceed 46 fl oz/acre. Rotation or tank mixing with other fungicides such as Protect, Legend, Spectro, Affirm, or 3336 will enhance disease management.
[6] SHOOT/STEM DISEASES Aerial/Shoot Blight (Phytophthora spp.)	1.9-3.9 fl oz every 7-28 days
[7] SOILBORNE DISEASES [Directed Spray] Rhizoctonia solani Sclerotium rolfsii Fusarium spp.	Apply as a directed spray to the soil surface and lower stem and crown area of the plant. 1.9 – 7.7 fl oz every 7-21 days.
[8] SOILBORNE DISEASES [Drench] Rhizoctonia solani Sclerotium rolfsii Fusarium spp.	0.39-1.7 fl oz [11-51 mL] Apply 1-2 pints of the solution per square foot surface area, every 7-28 days. See Ornamentals Section for additional drench directions.

PLANT SAFETY: UPGRADE has been shown to be safe when applied to the ornamental plants listed in Tables 2 and 3. However, due to the large number of genera, species and varieties of ornamental and nursery plants, it is impossible to test every one for tolerance to UPGRADE. Neither the manufacturer nor the seller has determined whether or not UPGRADE can be used safely on genera, species, or varieties of ornamental and nursery plants not specified on this label. The professional user should conduct small scale testing to insure plant safety prior to broad scale commercial use on plant genera and species not listed in this label. In addition, do not tank mix UPGRADE with other fungicides, insecticides, herbicides, fertilizer, adjuvants, etc, unless local experience indicates that the tank mix is safe to ornamental plants.

Do not apply UPGRADE to certain apple, crabapple, or cherry trees due to possible phytotoxicity. Furthermore, do not use spray equipment that has applied UPGRADE for use in these sensitive crops due to possible phytotoxicity from residue remaining in the sprayer.

Tolerant Ornamental Plants: UPGRADE has been found to be safe when applied to the plants listed in Tables 2 and 3 when applied according to recommended application methods, rates, and timings.

TABLE 2; Tolerant Plants Listed by Botanical Name

BOTANICAL NAME	COMMDN NAME	DISEASES
Abelia spp.	Abelia	2
Abies fraseri	Fraser fir	1,4
Abies procera	Noble Fir	1,4
Acer palmatum	Japanese maple	2
Acer saccharum	Sugar maple	2
Ageratum spp.	Floss-Flower	3,4
Ageratum spp.	Pussy's-Foot	3,4
Aglaonema spp.	Chinese evergreen	2,4
Ajuga reptans	Bugle, Bugleweed	3
Antirrhinum spp.	Snap-Dragon	2[DM],3,4
Aphelandra spp.	Zebra-Plant	2
Artemisia spp.	Mugwort, Sagebrush	2
Artemisia spp.	Wormwood	2
Aster spp.	Aster, Starwort	4
Aucuba japonica	Japanese aucuba, Japanese laurel	7
Begonia spp. (except Rieger begonia)	Begonia	2,3
Berberis thunbergii	Barberry	3,4
Betula nigra	River birch	3,4
Bougainvillea spp.	Bougainvillea	2
Brassaia actinophylla	Rubber-tree, Umbrella-tree	2,7

Buddleia davidii	Buddleia, Butterfly-bush	2
Buxus sempervirens	Boxwood	2,7 [Rhizoctonia]
Caladium spp.	Caladium	7
Camellia japonica	Camellia	2
Caryota urens	Sago Palm	2,7
Catharanthus roseus	Vinca	2
Ceanothus sanguineus	Wild lilac	3
Ceanothus spp.	Ceanothus, California lilac, Snowball	3
Cedrus atlantica	Atlas cedar	2,4
Cedrus spp.	White cedar	2,4
Cercis occidentalis	Western redbud	2
Chamaecyparis spp.	Cypress, Leyland cypress	1
Chamaecyparis pisifera	Sawara cypress	1
Chamaedora elegans	Parlor palm	7
Chrysanthemum spp.	Chrysanthemums	2, 7 [Fusarium]
Clethra alnifolia	Clethra, White alder	2
Cornus spp.	Dogwood, Pink dogwood, Flowering dogwood	2[Anthracnose],3
Cornus florida	Dogwood	2 [Anthracnose],3
Cortaderia selloana	Pampas grass	3
Cotoneaster adpressus	Creeping Cotoneaster	7
Cotoneaster horizontalis	Cotoneaster – variegated rockspray	7
Cyclamen spp.	Cyclamen	7 [Fusarium]
Cyperus spp.	Cyperus	1
Delphinium spp.	Larkspur	2
Dianthus caryophyllus	Carnation	3,4
Dianthus spp.	Pink	3,4
Dieffenbachia spp.	Oumb-Cane	2
Dietes iridiodes	African iris, Butterfly iris	4 [Puccinia]
Digitalis spp.	Foxglove	2,3
Epipremnum spp.	Pothos	2
Erica dareyensis	Heather	2
Euonymus alata	Dwarf winged euonymus	2
Euonymus alatus	Burning bush	2
Euonymus 15ndromeda	Evergreen euonymus	2
Euphorbia spp.	Poinsettia	2 [Alternaria]
Fatsia japonica	Japanese fatsia, Paper-plant	2
Ficus spp.	Fig	2
Forsythia viridissima	Forsythia	2
Gaillardia spp.	Blanket-Flower	2
Gardenia jasminoides	Gardenia	3
Geranium spp.	Cranesbill	5 [Botrytis]
Gerbera jamesonii	Gerber daisy, Transvaal daisy	3
Hedera algeriensis	Algerian ivy	2
Hedera helix	English ivy	2
Hibiscus moscheutos	Hibiscus	2,3
Hibiscus rosa-sinensis	Hibiscus	2,3
Hibiscus syriacus	Rose of Sharon	2,3
Hosta spp.	Hosta	2
Hydrangea macrophylla	French hydrangea	2,3
Hydrangea spp.	Hydrangea	2,3
Ilex spp.	Holly, Winterberry, Yaupon	3
Impatiens spp.[1]	Balsam, Impatiens [1]	2 [Alternaria], 7 [Rhizoctonia
Iris xiphium	Iris (bulbous, Spanish, Dutch)	2 [Iris Leaf Spot]
Itea virginica	Virginia willow	3,4
Juniperus procumbens	Juniper	1 [Phomopsis], 4
Juniperus scopulorum	Juniper	1 [Phomopsis], 4
Juniperus spp.	Juniper	1 [Phomopsis],4

Juniperus virginiana	Red cedar	1 [Phomopsis],4
Lagerstroemia indica	Crapemyrtle	2,3
Laurus nobilis	Laurel	3
Lilium spp.	Asiatic Lily	2
Liriope muscari	Lily-turf	2
Lobulaha maritime	Sweet alyssum	7
Magnolia grand/flora	Southern magnolia	2
Magnolia soulangiana	Saucer magnolia	2
Magnolia spp.	Magnolia	2
Malus spp.	Crabapple (See Table 4 for variety list)	2 [Scab]
Nandina domestica	Nandina	2
Nerium oleander	Oleander, Rose-bay	2
Pelargonium spp.	Geranium	3, 4, 5 [Botrytis]
Pennisetum alopecuroides	Grass	2
Peperomia spp.	Baby rubber-plant	2,7
Petunia spp.	Petunia	6
Phalaris spp.	Dwarf pampas grass	3
Philodendron spp.	Philodendron	2
Phlox spp.	Phlox	3
Phoenix dactylifera	Date palm	2,7
Phoenix roebelenii	Roebelin's palm	2,7
Photinia glabra	Red-tip photinia	2,3,4
Picea abies	Norway spruce	1
Picea glauca	White spruce	1
Picea pungens	Blue spruce	1
Pieris japonica	Japanese Andromeda	2,7
Pinus muhgo	Muhgo pine	1 [Tip Blight], 4
Pinus nigra	Black pine	1 [Tip Blight, 4
Pinus silvestris	Scotch pine	1,4
Pinus spp.	Pine	1 [Tip Blight],4
Pinus 16ndrome	Eastern white pine	1 [Tip Blight],4
Pittosporum spp.	Australian laurel	3,4
Pittosporum tobira	Mock-orange	3,4
Plectranthus spp.	Swedish ivy, Coleus	2
Populus trichocarpa	Poplar	4
Populus spp.	Aspen Trees	2
Potentilla spp.	Cinquefoil	2
Primula spp.	Primrose	2
Prunus pumila	Cherry	2,5
Prunus spp.	Flowering plum, Purple-leaf plum	2,5
Pseudotsuga spp.	Douglas fir	1.4
Pyrus calleryana	Bradford's pear	3
Quercus 16ndrome	Red oak	2,3
Quercus palustris	Pin oak	2,3
Rhaphiolepsis indica	Indian hawthorn	2,3,4
Rhododendron spp.	Azaleas, Rhododendron	2[Anthracnose],3,6,7
Rhododendron spp.	Glacier Azalea	2[Anthracnose],3,6,7
Rosa spp.	Rose	2 [Alternaria, Downy Mildew, 3 [Sphaerotheca], 4 [Phragmidium]
Rosmarinus spp.	Rosemary (prostrate)	2
Rudbeckia hirta	Black-eyed-susan	2
Salvia spp.	Sage	3,4
Schlumbergera	Holiday cactus	2,7
Sedum spp.	Orpine, Stonecrop	2
Sempervivum spp.	Live-forever, House-Leek	2
Setaria spp.	Ribbon-grass	2,3
Spathiphyllum floribundium	Peace lily	2,7

Spirea budalda	Spirea	3
Spirea japonica	Spirea	3
Syagrus romanzoffianum	Queen palm	2
Tagetes spp	Marigold	2 [Alternaria]
Taxus baccata	Spreading yew	7
Thuja plicata	Western Red Cedar	4
Thujopsis spp.	Arborvitae	2
Thymus serphyllum	Creeping thyme	2
Tsuga heterophylla	Western Hemlock	4
Tsuga spp.	Hemlock	4
Verbena spp.	Verbena, Vervain	3
Viburnum spp.	Viburnum	2,3,4
Vinca spp.	Periwinkle	2,6
Viola spp. [1]	Viola, Pansy [1]	2
Wiegela florida	Pink wiegela	2
Yucca spp.	Yucca	7
Zinnia spp.	Zinni	2 [Alternaria],3

Footnotes: [1] Do not exceed 3.9 fl oz/100 gallons on indicated species

TABLE 3: Tolerant Varieties of Crabapple and Other Malus Species

Arkansas Black	Eleyi	Mary Potter	*M. seiboldii*
M.atrosanguinea	Enterprise	Molten Lava	Selkirk
M. baccata	Evereste	New Centennial	Sentinel
M. baccata var. jackii	Eyelynn	Ormiston Roy	Silver Moon
M. baccata var. mandshurica	*M. floribunda*	Pink Satin	Silverdrift
Callaway	Gloriosa	Prairie Maid	Sinai Fire
Candymint Sargent	Golden Delicious	Prairifire	*M. spectablis*
Christmas Holly	Golden Raindrops	Profusion	Sugar Tyme
M. coronaria	Hopa	*M. pumila*	Van Eseltine
David	Indian Magic	Ralph Shay	White Angel
Dolgo	Island	Red Jade	Williams Pride
Donald Wyman	Katherine	Red Baron	Winter Gold
Dorothea	Lancelot	Sargent	Yellow Delicious
Doubloons	Louisa	*M. sargentii*	*M. zumi Calocarpa*

TABLE 4: Intolerant Plants -- **Do Not Apply UPGRADE to these species or varieties.**

COMMON NAME	BOTANICAL NAME
Apple	*Malus domestica*
Crabapple - Flame variety	*Malus spp.*
Crabapple - Brandywine variety	*Malus spp.*
Crabapple - Novamac variety	*Molus spp.*
Cherry, Flowering - Yoshina variety	*Prunus yedoensis.*
Leatherleaf Fern	*Rumohro adianformis*
and Other Ferns for cut foliage	and other species for cut foliage
Privet	*Ligustrum spp.*

Conifers including Christmas Trees

UPGRADE may be used to control certain diseases on conifers in production (indoor and outdoor) and landscape situations. Please see the Ornamental Section above for more detailed directions for use in landscape situations.

Target Disease	Use Rate fluid ounces product/A (lb a.i/A)	Application Directions
Diplodia tip blight *(Diplodia pinea)* Lophodermium needlecast	6.2-15.4 (0.1-0.25)	Begin applications prior to disease development and continue throughout the season at 7-21-day intervals following the resistance management guidelines. Apply by ground, air, or chemigation. An

(Lophodermium pinastri) Swiss needlecast *(Phaeocrytopus gaumannii)*		adjuvant may be added at label specified rates. Do not make more than two (2) sequential applications of this product or other Group 11 fungicides before alternating with a fungicide that has a different mode of action.
Specific Use Restrictions: Do not exceed 1 gallon of this product/Acre per season.		

COMMERCIAL PRODUCTION ROSES

Target Disease	Use Rate fluid ounces product/A (lb a.i/A)	Application Directions
Downy Mildew *(Peronospora sparsa)* Powdery Mildew *(Spherotheca pannosa)* Rust *(Phragmidium mucronatum, P. tuberculatum, and other Phragmidium spp.* Septoria Leaf Spot *(Septoria rosea)* Alternaria Leaf Spot *(Alternaria alternata)*	3.1-15.4 (0.05-0.25)	Heritage application should begin prior to disease development and continue throughout the season on 7-21 day intervals following the resistance management guidelines. Applications may be made by ground, air or chemigation. An adjuvant may be added at recommended rates. Do not make more than 4 sequential applications of Upgrade before alternating with a fungicide that is not in Group 11. Do not make more than 8 applications per acre per year.
Specific Use Restrictions: Do not exceed 1 gallon of this product/Acre per season.		

BRASSICA - LEAFY GREENS Subgroup 5B

Broccoli Raab; Chinese Cabbage (bok choy); Collards; Kale; Mizuna; Mustard Greens; Mustard Spinach; Rape Greens; all Cultivars and/or Hybrids of these

Target Disease	Use Rate fl oz product/A (lb a.i/A)	Application Directions
Black spot *(Alternaria* spp.) Cercospora leaf spot *(Cercospora* spp.) White rust *(Albugo candida)*	6.0-15.5 (0.10-0.25)	Begin applications prior to disease development and continue throughout the season at 7- to 14-day intervals following the resistance management guidelines. Apply by ground, air, or chemigation. An adjuvant may be added at label specified rates. Do not make more than one application of this product or other Group 11 fungicides before alternating with a fungicide that has a different mode of action.
Soilborne Diseases Seedling Root Rot, Basal Stem Rot *(Rhizoctonia solani)*	0.40-0.80 fl oz/1000 row ft	For soilborne/seedling disease control, see directions and rates under **SOILBORNE/SEEDLING DISEASE CONTROL** section.
Use Limitations: Do not exceed 46 fl oz of this product/Acre per season. Do not exceed the equivalent of 0.75 lb a.i./Acre per season from any azoxystrobin-containing products. Pre-harvest Interval (PHI) = 0 Day.		

CUCURBIT VEGETABLES, Crop Group 9

Cantaloupe; Chayote; Chinese-Waxgourd; Cucumber; Gourds; Honeydew Melon; *Momordica* spp. (bitter melon, balsam apple); Muskmelon; Watermelon; Pumpkin; Squash; Zucchini; Varieties, Cultivars and/or Hybrids of these

Target Disease	Use Rate fl oz product/A (lb a.i/A)	Application Directions
Anthracnose (*Colletotrichum lagenarium*) Belly rot (*Rhizoctonia solani*) Downy mildew (*Pseudoperonospora cubensis*) Gummy stem blight (*Didymella bryoniae*) Leaf spots (*Alternaria* spp., *Cercospora* spp.) Myrothecium canker (*Myrothecium roridum*) Plectosporium blight (*Plectosporium tabacinum*) Powdery Mildew (*Sphaerotheca fuliginea*), (*Erysiphe cichoracearum*) Ulocladium Leaf Spot (*Ulocladium cucurbitae*)	6.0-15.5 (0.10-0.25)	For downy mildew and powdery mildew, make preventative applications at 5- to 7-day intervals. For belly rot control, make the first application at the 1-3 leaf crop stage with a second application just before vines tip over or 10-14 days later, whichever occurs first. For all other diseases, begin applications prior to disease development and continue throughout the season at 7- to 14-day intervals following the resistance management guidelines. Apply by ground, air, or chemigation. An adjuvant may be added at label specified rates. Do not tank mix this product with crop oil concentrates (COC), methylated spray oil (MSO) or silicon adjuvants. Do not tank mix this product with malathion, Kelthane®, Thiodan®, Phaser®, Lannate®, Lorsban®, M-Pede® or Botran®. Do not make more than one application of this product or other Group 11 fungicides before alternating with a fungicide that has a different mode of action. Do not make more than four (4) foliar applications of this product or other Group 11 fungicides per crop per acre per year.
Soilborne diseases Rhizoctonia root rot (*Rhizoctonia solani*)	0.4-0.8 fl oz/1000 row ft	For soilborne/seedling disease control, see directions and rates under **SOILBORNE/SEEDLING DISEASE CONTROL** section.
Use Limitations: Do not exceed 92.3 fl oz of this product/Acre per season. Do not exceed the equivalent of 1.5 lb a.i./Acre per season from any azoxystrobin-containing products. Pre-harvest Interval (PHI) = 1 Day.		

FRUITING VEGETABLES – PEPPER / EGGPLANT Subgroup 8-10B *

African Eggplant; Bell Pepper; Eggplant; Martynia; Nonbell Pepper; Okra; Pea Eggplant; Pepino; Roselle; Scarlet Eggplant; Cultivars, Varieties, and/or Hybrids of these

For use on tomatoes, see crop specific Application Directions for Tomato Subgroup 8-10A

Target Disease	Use Rate fl oz product/A (lb a.i/A)	Application Directions
Anthracnose (*Colletotrichum* spp.) Powdery Mildew (*Sphaerotheca* spp.)	6.0-15.5 (0.10-0.25)	Begin applications prior to disease development and continue throughout the season at 7- to 14-day intervals following the resistance management guidelines. Apply by ground, air, or chemigation. An adjuvant may be added at label specified rates. Do not make more than one application of this product or other Group 11 fungicides before alternating with a fungicide that has a different mode of action.
Soilborne diseases Rhizoctonia seedling rot (*Rhizoctonia solani*)	0.4-0.8 fl oz/1000 row ft	For soilborne/seedling disease control, see directions and rates under **SOILBORNE/SEEDLING DISEASE CONTROL** section.
Use Limitations: Do not exceed 61.5 fl oz of this product/Acre per season. Do not exceed the equivalent of 1.0 lb a.i./Acre per season from any azoxystrobin-containing products. Pre-harvest Interval (PHI) = 0 Day.		

HERBS & SPICES (Except Black Pepper), Crop Group 19

Allspice; Angelica; Anise (seed); Anise (star); Annatto (seed); Balm; Basil; Borage; Burnet; Camomile; Caper (buds); caraway; Caraway (black); cardamom; Cassia Bark; Cassia Buds; Catnip; Celery Seed; Chervil (dried); Chinese Chive; Chive; Cinnamon; Clary; Clove Buds; Coriander Leaf (cilantro or Chinese parsley); Coriander Seed (cilantro); Costmary; Culantro (leaf); Culantro (seed); Cumin; Curry (leaf); Dill (dillweed); Dill (seed); Fennel (common); Florence Fennel (seed); Fenugreek; Grains of Paradise; Horehound; Hyssop; Juniper Berry; Lavender; Lemongrass; Lovage (leaf); Lovage (seed); Mace; Marigold; Marjoram; Mustard (seed); Nasturtium; Nutmeg; Parsley (dried); Pennyroyal; Pepper (black and white); Poppy (seed); Rosemary; Rue; Saffron; Sage; Savory (summer and winter); Sweet Bay; Tansy; Tarragon; Thyme; Vanilla; Wasabi, Wintergreen; Woodruff; Wormwood

Target Disease	Use Rate fl oz product/A (lb a.i/A)	Application Directions
Corynespora blight (*Corynespora cassiicola*) Dill blight (*Cercosporidium punctum*) Phoma blight (*Passalora puncta*)	6.0-15.5 (0.10-0.25)	Begin applications at the onset of disease development and continue throughout the season at 7-day intervals following the resistance management guidelines. Apply by ground only. An adjuvant may be added at label specified rates. Use a minimum of 30 gallons of water per acre. Do not make more than two (2) sequential applications of this product or other Group 11 fungicides before alternating with a fungicide that has a different mode of action.
Fusarium Rhizome and Root Rot (*Pythium* spp.)	6.2-15.4 (0.10-0.25)	**For Wasabi only**: Begin applications at the onset of disease development and continue throughout the season at 7-day intervals following the resistance management guidelines. Apply by ground or chemigation. An adjuvant may be added at label specified rates. Use a minimum of 30 gallons of water per acre. Do not make more than two (2) sequential applications of this product or other Group 11 fungicides before alternating with a fungicide that has a different mode of action.
Use Limitations: Do not exceed 92.3 fl oz of this product/Acre per season. Do not exceed the equivalent of 1.5 lb a.i./Acre per season from any azoxystrobin-containing products. Pre-harvest Interval (PHI) = 0 Day.		

LEAFY VEGETABLES (Except Brassica)

Amaranth, Arugula, Cardoon, Celery, Celtuce, Chervil, Chrysanthemum (edible), Corn salad, Cress, Dandelion, Dock, Endive, Fennel, Lettuce (head and leaf), Orach, Parsley, Purslane, Radicchio, Rhubarb, Spinach, Swiss Chard, Cultivars, Varieties, and/or Hybrids of these

Target Disease	Use Rate fl oz product/A (lb a.i/A)	Application Directions
Foliar Diseases Alternaria leaf spot *(Alternaria sonchi, A.* spp.) Anthracnose *(Microdochium panattonianum, Colletotrichum dematium)* Cercospora leaf spot (*Cercospora* spp.) Septoria leaf spot (*Septoria petroselini*) White rust *(Albugo occidentalis)*	6.0-15.5 (0.10-0.25)	<u>For downy and powdery mildew</u>, make preventative applications at 5- to 7-day intervals. <u>For all other diseases</u>, begin applications prior to disease development and continue throughout the season at 7- to 14-day intervals following the resistance management guidelines. Apply by ground, air, or chemigation. An adjuvant may be added at label specified rates. Do not make more than one application of this product or other Group 11 fungicides before alternating with a fungicide that has a different mode of action. **ATTENTION** Applications of this product to leafy vegetable foliage may contribute to foliar phytotoxicity under certain circumstances. Proceed with caution with regard to tank mixes and adjuvants when treating any leafy vegetable crops with this product. When treating leaf lettuce, do not tank mix this product with AMBUSH® WP, Pounce® WP, Aliette®, Warrior® with Zeon ™ Technology, or any other product that may increase the penetration of this product into the leaf surface such as, but not limited to, silicone wetters.
Downy mildew *(Bremia lactucae)* Powdery *mildew* *(Eyrisiphe cichoracearum)*	12.0-15.5 (0.20-0.25)	
Soilborne Diseases Web blight, Bottom rot, Crater rot, Root rot *(Rhizoctonia solani)*	0.4-0.8 fl oz/ 1000 row ft	For soilborne/seedling disease control, see directions and rates under **SOILBORNE/SEEDLING DISEASE CONTROL** section.
Use Limitations: Do not exceed 92.3 fl oz of this product/Acre per season. Do not exceed the equivalent of 1.5 lb a.i./Acre per season from any azoxystrobin-containing products. Pre-harvest Interval (PHI) = 0 Day.		

TOMATO Subgroup 8-10A

Bush Tomato; Cocona; Currant Tomato; Garden Huckleberry; Goji Berry; Groundcherry; Naranjilla; Sunberry; Tomatillo; Tomato; Tree Tomato; Cultivars, Varieties, and/or Hybrids of these

Target Disease	Use Rate fl oz product/A (lb a.i/A)	Application Directions
Anthracnose *(Colletotrichum coccodes)* Black mold *(Alternaria alternata)* Buckeye rot *(Phytophthora spp.)* Early blight *(Alternaria solani)* Powdery Mildew *(Oidiopsis sicula)* Septoria Leaf Spot *(Septoria lycopersici)* Target spot *(Corynespora cassiicola)*	5.0-6.2 (0.08-0.10)	Begin applications prior to disease development and continue throughout the season following the resistance management guidelines. Apply by ground, air, or chemigation. For late blight, apply this product at 5- to 7- day intervals. For all other tomato diseases, make applications at 7- to 21-day intervals. Use of adjuvants may result in severe phytotoxicity. Do not exceed 0.125% adjuvant (v/v). Thank mixtures with dimethoate may cause phytotoxicity. For fresh market tomatoes, do not use adjuvants or tank mix this product with other pesticides formulated as emulsifiable concentrates (EC). Do not make more than one application of this product or other Group 11 fungicides before alternating with a fungicide that has a different mode of action.
Late Blight *(Phytophthora infestans)*	6.2 (0.10)	
Use Limitations: Do not exceed 37 fl oz of product/Acre per season. Do not exceed the equivalent of 0.6 lb a.i./Acre per season from any azoxystrobin-containing product. Pre-harvest Interval (PHI) = 0 Day.		

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage and disposal.

PESTICIDE STORAGE Store in original containers only. Keep container closed when not in use. Do not store near food or feed. In case of spill on floor or paved surfaces, mop and remove to chemical waste storage area until proper disposal can be made if product cannot be used according to the label.

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative of the nearest EPA Regional Office for guidance.

CONTAINER HANDLING:

[**Note to Reviewer:** The following statement will be included on all Final Printed Labels bearing multiple Container Handling statements] **"NOTE:** This product is available in multiple containers. Refer to the Net Contents section of this product's labeling for the applicable "Nonrefillable" or "Refillable" designation. Follow the container handling instructions below that apply to your container type/size."

[Nonrefillable Containers 5 Gallons or Less]

Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. **Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke.

[Nonrefillable containers larger than 5 gallons]

Nonrefillable container. Do not reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure-rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

[Refillable containers larger than 5 gallons]

Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times

WARRANTY DISCLAIMER

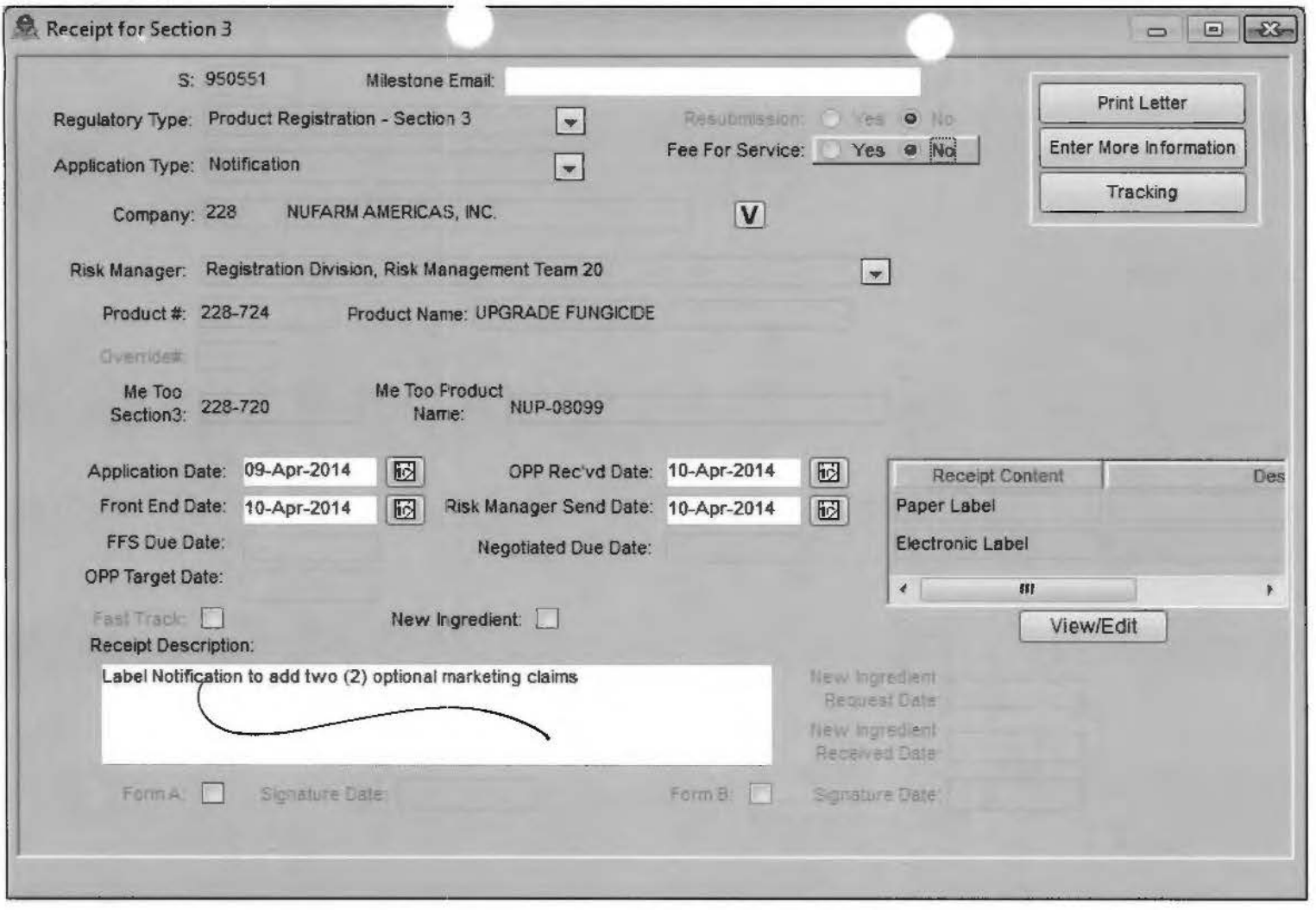
The directions for use of this product must be followed carefully. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, (1) THE GOODS DELIVERED TO YOU ARE FURNISHED "AS IS" BY MANUFACTURER OR SELLER AND (2) MANUFACTURER AND SELLER MAKE NO WARRANTIES, GUARANTEES, OR REPRESENTATIONS OF ANY KIND TO BUYER OR USER, EITHER EXPRESS OR IMPLIED, OR BY USAGE OF TRADE, STATUTORY OR OTHERWISE, WITH REGARD TO THE PRODUCT SOLD, INCLUDING, BUT NOT LIMITED TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, USE, OR ELIGIBILITY OF THE PRODUCT FOR ANY PARTICULAR TRADE USAGE. UNINTENDED CONSEQUENCES, INCLUDING BUT NOT LIMITED TO INEFFECTIVENESS, MAY RESULT BECAUSE OF SUCH FACTORS AS THE PRESENCE OR ABSENCE OF OTHER MATERIALS USED IN COMBINATION WITH THE GOODS, OR THE MANNER OF USE OR APPLICATION, INCLUDING WEATHER, ALL OF WHICH ARE BEYOND THE CONTROL OF MANUFACTURER OR SELLER AND ASSUMED BY BUYER OR USER. THIS WRITING CONTAINS ALL OF THE REPRESENTATIONS AND AGREEMENTS BETWEEN BUYER, MANUFACTURER AND SELLER, AND NO PERSON OR AGENT OF MANUFACTURER OR SELLER HAS ANY AUTHORITY TO MAKE ANY REPRESENTATION OR WARRANTY OR AGREEMENT RELATING IN ANY WAY TO THESE GOODS.

LIMITATION OF LIABILITY

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, IN NO EVENT SHALL MANUFACTURER OR SELLER BE LIABLE FOR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, OR FOR DAMAGES IN THEIR NATURE OF PENALTIES RELATING TO THE GOODS SOLD, INCLUDING USE, APPLICATION, HANDLING, AND DISPOSAL. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, MANUFACTURER OR SELLER SHALL NOT BE LIABLE TO BUYER OR USER BY WAY OF INDEMNIFICATION TO BUYER OR TO CUSTOMERS OF BUYER, IF ANY, OR FOR ANY DAMAGES OR SUMS OF MONEY, CLAIMS OR DEMANDS WHATSOEVER, RESULTING FROM OR BY REASON OF, OR RISING OUT OF THE MISUSE, OR FAILURE TO FOLLOW LABEL WARNINGS OR INSTRUCTIONS FOR USE, OF THE GOODS SOLD BY MANUFACTURER OR SELLER TO BUYER. ALL SUCH RISKS SHALL BE ASSUMED BY THE BUYER, USER, OR ITS CUSTOMERS. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BUYER'S OR USER'S EXCLUSIVE REMEDY, AND MANUFACTURER'S OR SELLER'S TOTAL LIABILITY SHALL BE FOR DAMAGES NOT EXCEEDING THE COST OF THE PRODUCT.

If you do not agree with or do not accept any of the directions for use, the warranty disclaimers, or limitations of liability, do not use the product and return it unopened to the Seller, and the purchase price will be refunded.

(RV030714)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Milestone Email:
Regulatory Type: Product Registration - Section 3
Application Type: Notification
Resubmission: Yes No
Fee For Service: Yes No
Print Letter
Enter More Information
Tracking
Company: 228 NUFARM AMERICAS, INC.
Risk Manager: Registration Division, Risk Management Team 20
Product #: 228-724
Product Name: UPGRADE FUNGICIDE
Override#:
Me Too Section3: 228-720
Me Too Product Name: NUP-08099
Application Date: 09-Apr-2014
OPP Rec'vd Date: 10-Apr-2014
Front End Date: 10-Apr-2014
Risk Manager Send Date: 10-Apr-2014
FFS Due Date:
Negotiated Due Date:
OPP Target Date:
Receipt Content
Des
Paper Label
Electronic Label
Fast Track:
New Ingredient:
View/Edit
Receipt Description:
Label Notification to add two (2) optional marketing claims
New Ingredient Request Date
New Ingredient Received Date
Form A:
Signature Date:
Form B:
Signature Date:

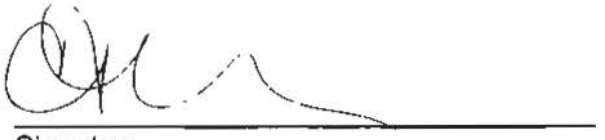
Certification with Respect to Label Integrity

version: 9/11/02

I certify that the information (including, but not limited to, text, tables, and graphics) contained in the electronic file identified below by file name and submitted with this certification is the same information as that on the paper copies of these documents included with this submission.

PROPOSED LABEL		
EPA Registration #	**Date Submitted to EPA**	**Electronic file name**
228-724	April 9, 2014	000228.00724.Upgradefungicide.040914.draft.NOTIF

I certify that the statements that I have made on this form are true, accurate, and complete. I acknowledge that any knowingly false or misleading statements may be punishable by fine or imprisonment or both under applicable law.



Signature

April 9, 2014
Date

Carrie M. Tackema
Name (typed)

Regulatory Manager
Title

There is an **ELECTRONIC LABEL** for this action

You can use Acrobat to compare the e-label to the previous version (and find the changes). You can also use Acrobat to mark-up the e-label with your comments.

If e-label was submitted via

CD-ROM with paper application

then you will find e-label in

Electronic Label Library

If the e-label is not found in the ELL then it was probably not named correctly and could not be entered into the ELL. However, the file can be retrieved from the CD which is retained by the Front End.

or

If e-label was submitted via

XML E-Submission (no paper)

then you will find e-label in

Documentum

See overview of processing e-labels on other side of this sheet.
If you have any questions on e-labels, please contact one of your division e-label experts:

AD	Willie Abney	308-1689
	Renae Whitaker	308-7003
	Tracy Lantz	308-6415
BPPD		
RD	Tom Harris	308-9423

PROCESSING ELECTRONIC LABELS

(rev. 1/5/09, tch)

If e-label submitted via XML e-submission (not on CD-ROM), you may wish to find e-label in Documentum, save e-label to "My Documents", add e-label to ELL, start below at step 5.

Initial E-Label per application (on CD-ROM with paper via ITRMD)

[1] ITRMD receives paper submission w/ e-label on CD

[2] Tracking record added to OPPIN

[3] ITRMD adds e-label to ELL

[4] ITRMD sends paper submission to AD/BPPD/RD

[5] Connect ELL record with OPPIN S#

in-process

[6] Save copy of e-label from ELL to My Documents

[7] Review label
(if acceptable, skip to step 20)

[8] Add comments to e-label
(save; add "with comments" to filename

[9] Print annotated e-label
(use "Print with Filename")

review

[10] Send annotated e-label to registrant via email
(also send "How To Print")

[11] File print of annotated e-label and email in jacket

[12] Add annotated e-label to ELL

[13] Close submission in OPPIN

out-process

Resubmission (via email to staffer or PM)

[14] Receive email submission w/ e-label attached

[15] Add tracking record to OPPIN

[16] Add e-label to ELL

[17] Connect ELL record with OPPIN S#

in-process

[18] Save copy of e-labels (old & new) from ELL to My Documents

[19] Compare old and new labels with Acrobat

(if revisions needed repeat steps 8-19)

review

[20] Print e-label, stamp, write cover letter
(use "Print with Filename")

[21] Mail stamped label & cover letter to registrant

[22] File stamped label & cover letter in jacket

[23] Add cover letter to ELL
(mandatory if accepted with comments)

[24] Close submission in OPPIN

out-process

process - big picture
1- create OPPIN tracking
2- put label in ELL; link to S#
3- save ELL label to MyDocuments
4- compare / comment
5- outprocess

techniques to know
- filename for e-labels
- "print with filename"
- compare / comment
- printing with comments

Material Sent for Data Extraction

Reg. # 228-TEU(-724)

Description: New product

☐ Material(s) Sent to Data Extraction Contractors:

- ☑ New Stamped Label Dated 3/7/14
- ☐ Notification Dated _____
- ☑ New CSF(s) Dated 12/17/13
- ☐ Other: _____

☐ Decision #: 483695

☐ Other Action/Comments: _____

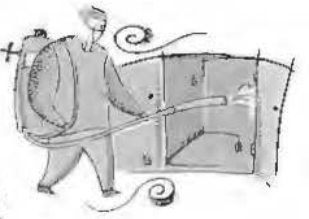
_____

File this coversheet and attached materials in the jacket. It must be well organized and clipped together, NOT STAPLED. Then give the jacket with the coversheet and materials to staff in the Information Services Center (ISC) (Room S-4900). If a jacket is full or only available as an image, please file materials in a new jacket and bring it down to the (ISC). For further information please call 703-605-0716.

Reviewer: Erin Malone

Phone: 7033470253 Division: RD

Date: 3/12/14



NEW APPLICATIONS

DATE: SEP 26 2013

FILE REG NUMBER: 228-TEL

FEP (OPPIN ENTRY) LV SEP 27 2013

(Initial & Date)

FILE ROOM: _____

(Initial & Date)

SIG: _____

(Initial & Date)

FILE ROOM: _____

(Initial & Date)

ASSIGN TO PM: AD ✓ **RD** JO **BPPD** _____

_____ **JACKET TO SHELF (data)**

REVISED 11/28/12

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Chemical Safety and Pollution Prevention
Office of Pesticide Programs
Registration Division (7504P)
1200 Pennsylvania Ave., N.W.
Washington, DC 20460

NOTICE OF PESTICIDE:

X Registration

_ Reregistration
Under FIFRA, as amended

EPA Reg. Number:	Date of Issuance:
228-724	MAR 0 7 2014

Term of Issuance: Conditional

Name of Pesticide Product:
Upgrade Fungicide

Name and Address of Registrant (include ZIP Code):
Nufarm Americas Inc.
4020 Aerial Center Parkway, Suite 101
Morrisville, NC 27560

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide and Rodenticide Act. Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

The application referred to above, submitted under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended is acceptable under FIFRA sec. 3(c)(7)(A) subject to the following conditions:

1. You must submit and/or cite all data required for registration/reregistration/ registration review of your product when the Agency requires all registrants of similar products to submit such data.
2. You are required to comply with the azoxystrobin Data Call-in identified below in a timely and adequate manner and submit your responses to Kelly Ballard. DCI# GDCI-128810-892, issued on 11/9/2011. A copy of the DCI is attached.

Signature of Approving Official: Shaja B. Joyner

Shaja B. Joyner, Product Manager (20)
Fungicide Branch/Registration Division/OPP/OCSPP (7504P)

Date: 3/7/2014

EPA Form 8570-6

3. You must comply with all of the data requirements in the referenced order within the deadlines established by the order. In the case of this DCI, those deadlines are measured from 11/9/2011 and the avian acute oral toxicity test has been extended through 3/15/2014. If you fail to satisfy the requirements in this Order, EPA will consider appropriate regulatory action, including, among other things, cancellation under FIFRA section 6(e).

Make the following change to the label:

a. Change the product registration number to "EPA Reg. No. 228-724"

Note: Submit the following data before the due date of 9/11/2015:

a. Storage Stability (830.6317) and Corrosion Characteristics (830.6320) studies.

Provide the Agency the following information prior to formulation this product:

a. The registration number and establishment number of the manufacturing or technical product from which your product is derived,
b. The name and address of the entity from which the manufacturing product was obtained, and
c. A copy of the bill of sale

Submit one copy of the revised final printed label for the record before the product is released for shipment.

The basic Confidential Statement of Formula (CSF) dated 12/17/2013 is acceptable.

If these requirements are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions. A copy of your label stamped "Accepted" is enclosed for your records.

Shaja B. Joyner
Product Manager (20)
Fungicide Branch
Registration Division (7504P)

Enclosures:
Label stamped "Accepted"
Product Chemistry Review dated 12/17/2013 {DP416526}
Similarity Clinic Memorandum dated 11/14/2013 {DP415957}

Group 11 Fungicide

UPGRADE™ Fungicide

Broad spectrum fungicide for the control of turf and ornamental plant disease and listed vegetable seedlings and transplants

ACTIVE INGREDIENT	
Azoxystrobin (methyl (E)-2-{2-[6-(2-cyanophenoxy)pyrimidin-4-yloxy]-phenyl}-3-methoxyacrylate	22.9%
OTHER INGREDIENTS	77.1%
TOTAL	100.0%

Contains 2.04 pounds of active ingredient per gallon

KEEP OUT OF REACH OF CHILDREN.

CAUTION / PRECAUTIÓN

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.
(If you do not understand the label, find someone to explain it to you in detail.)

SEE LABEL BOOKLET FOR FIRST AID AND PRECAUTIONARY STATEMENTS

ACCEPTED
MAR 0 7 2014
Under the Federal Insecticide, Fungicide,
and Rodenticide Act, as amended, for the
pesticide registered under:

EPA. Reg. No: 228-724

EPA REG. NO. 228-XXX

EPA Est. No. _____

MANUFACTURED FOR
NUFARM AMERICAS INC.
11901 S. AUSTIN AVENUE
ALSIP, IL 60803

NET CONTENTS: _____ (Gal.) (_____ liters)

[Designation as "NONREFILLABLE" or "REFILLABLE" for containers > 5 GAL]

000228-00XXX.2014030614.draft

FIRST AID	
IF ON SKIN OR CLOTHING	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.

HOTLINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact (877) 325-1840 for emergency medical treatment information.

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION / PRECAUCTIÓN

Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemically resistant to this product are listed below. If you want more options follow the instructions for Category A on an EPA chemical resistance category selection chart.

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical resistant gloves made of any waterproof material such as polyvinyl chloride, nitrile rubber or butyl rubber.
- Shoes plus socks

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions exist for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Controls

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240 (d)(4-6), the handler PPE requirements may be reduced or modified as specified in the WPS.

IMPORTANT: When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for "applicators and other handlers" and have such PPE immediately available for use in an emergency, such as a spill or equipment breakdown.

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Wash thoroughly with soap and water after handling.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to freshwater and estuarine/marine fish and aquatic invertebrates. Do not apply directly to water except as specified on this label. For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwater or rinsate.

The active ingredient, azoxystrobin, in this product can be persistent for several months or longer. Azoxystrobin has degradation products which have properties similar to chemicals which are known to leach through soil to ground water under certain conditions as a result of agricultural use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.

Notify State and/or Federal authorities and Nufarm immediately if you observe any adverse environmental effects due to use of this product.

PHYSICAL OR CHEMICAL HAZARDS

Do not mix or allow coming in contact with oxidizing agent. Hazardous chemical reaction may occur.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

FAILURE TO FOLLOW THE USE DIRECTIONS AND PRECAUTIONS ON THIS LABEL MAY RESULT IN PLANT INJURY OR POOR DISEASE CONTROL

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), notification to workers, and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water is:

- Coveralls
- Chemical resistant gloves made of any waterproof material such as polyvinyl chloride, nitrile rubber or butyl rubber
- Shoes plus socks

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box only apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Do not treat areas while unprotected humans or domestic animals are present in the treatment areas. Because certain states may require more restrictive reentry intervals, consult your State Department of Agriculture for further information.

Turf and Landscape Uses: Do not enter or allow others to enter the treated area until sprays have dried.

PRODUCT INFORMATION

This product is a suspension concentrate (SC) or flowable formulation. It is a broad spectrum, preventive fungicide with systemic and curative properties recommended for the control of many important plant diseases. This product may also improve the yield and/or quality of the crop. These additional benefits are due to positive effects on plant physiology. The effects may vary according to factors such as the crop, crop hybrid, or environment. This product may be applied as a foliar spray in alternating spray programs or in tank mixes with other registered crop protection products. Make all applications according to the use directions on this label.

USE PRECAUTIONS AND LIMITATIONS

Some phytotoxicity may be observed when applying tank mixtures of this product with emulsifiable concentrate (EC) formulations. These effects may be enhanced if applications are made under cool, cloudy conditions and these conditions remain for several days following application. In addition, adjuvants that contain some forms of silicone may also contribute to phytotoxicity.

ATTENTION

This product is extremely phytotoxic to certain apple varieties.

AVOID SPRAY DRIFT. Extreme care must be used to prevent injury to apple trees (and apple fruit). Refer to SPRAY DRIFT MANAGEMENT information below.

DO NOT spray this product where spray drift may reach apple trees.

DO NOT spray apple trees with spray equipment previously used to apply this product. Even trace amounts of product may cause unacceptable phytotoxicity to certain apple and crabapple varieties.

SPRAY DRIFT MANAGEMENT

The interaction of many equipment and weather related factors determine the potential for spray drift.

DO NOT spray when conditions favor drift beyond the area intended for application. Conditions which may contribute to drift include thermal inversion, wind speed and direction, sprayer nozzle/pressure combinations, spray droplet size, etc. Contact your State Extension agent for spray drift prevention guidelines in your area.

DO NOT apply when weather conditions favor drift from treated areas to non-target aquatic habitat.

AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR.

INTEGRATED PEST MANAGEMENT (IPM)

To reduce the potential for development of resistance, integrate this product into an overall disease and pest management strategy whenever the use of a fungicide is required. Follow cultural practices known to reduce disease development such as selection of disease-tolerant varieties, removal of plant debris in which inoculum overwinters, and proper timing and placement of irrigation. Consult with your State Agricultural Experiment Station or Extension Service specialist for additional IPM strategies established for your area. This product may be used in State Agricultural Extension advisory (disease forecasting) programs which recommend application timing based on environmental factors favorable for disease development.

Crop Tolerance: Plant tolerance has been found to be acceptable for all crops on the label. However, not all possible tank mixture combinations have been tested under all conditions. It is recommended to test tank mixture combinations on a small portion of the crop to assess plant response before large scale applications. See the USE PRECAUTIONS AND LIMITATIONS section for apple phytotoxicity information.

RESISTANCE MANAGEMENT

This product is a Group 11 fungicide. The mode of action for azoxystrobin, the active ingredient in this product, is the inhibition of the Qol (quinone outside) site within the electron transport system as well as disruption of membrane synthesis by blocking demethylation [Group 11]. Fungal pathogens can develop resistance to products with the same mode of action when used repeatedly. Because resistance development cannot be predicted, use this product in accordance with resistance management strategies established for the crop and use area. Consult your local or State agricultural authorities for resistance management strategies that are complementary to those in this label. Resistance management strategies may include alternating and/or tank-mixing with products having different modes of action or limiting the total number of applications per season. Nufarm Americas Inc. encourages responsible resistance management to ensure effective long-term control of the fungal diseases on this label with Group 11 (Qol) fungicides.

Follow the crop specific resistance management recommendations provided in the directions for use.

If no resistance recommendation on number of applications is specified in the directions for use, follow the recommendations in the table below.

If planned total number of fungicide applications per crop is:	1	2	3	4	5	6	7	8	9	10	11	12
Recommended Solo Qol fungicide sprays	1	1	2	2	2	2	2	3	3	3	3	4
Recommended Qol fungicide sprays in mixture (tank-mix or formulated)	1	2	2	2	2	3	3	4	4	5	5	6

Under conditions requiring multiple fungicide applications, develop season long spray programs for Group 11 (QoI) fungicides. In crops where two sequential Group 11 fungicide applications are made, alternating with two or more applications of a fungicide that is not in Group 11 will help reduce the potential for resistance development. If more than 12 applications are made, observe the following guidelines:

- When a QoI fungicide is used as a solo product, make no more than 1/3 (33%) of the total number of fungicide applications per season with the QoI containing product.
- For programs including tank mixes or premixes of QoI fungicide with mixing partners of a different mode of action, the number of QoI containing applications must represent no more than 1/2 (50%) of the total number of fungicide applications per season.
- In programs including applications of QoI fungicides as both solo products and mixtures, the number of QoI containing applications must represent no more than 1/2 (50%) of the total number of fungicide applications per season.

If a Group 11 fungicide is applied to the seed or soil, do not make another application with a Group 11 fungicide for at least 3 weeks.

SOIL BORNE/SEEDLING DISEASE CONTROL

For crops that have specific use directions for soil borne disease control:

This product can provide control of many soil borne diseases if applied early in the growing season. Specific applications for soil borne diseases include in-furrow applications and banded applications applied over the row, either shortly after plant emergence or during herbicide applications or cultivation. These applications will provide control of pre- or postemergence damping off and diseases that infect plants at the soil-plant interface.

The use of either type of application depends on the regional cultural practices. In some locations, one type of application may provide better disease control than the other, depending on the timing of the disease epidemic. Seedling diseases are generally controlled by in-furrow applications while banded applications are more effective against soil borne diseases that develop later in the season. Consult your local expert to get some guidance regarding application type.

Under cool, wet conditions, crop injury from soil directed applications can occur.

Drip

Refer to the **Instructions for Use through Irrigation Systems (Chemigation) section.**

PRODUCT USE INSTRUCTIONS

Application: Thorough coverage is necessary to provide good disease control. Make no more spray solution than is needed for application. Avoid spray overlap, as crop injury may occur.

Adjuvants: The use of an adjuvant may improve consistency and performance of this product. Refer to crop specific directions for use for information regarding the use of adjuvants.

Efficacy: Under certain conditions conducive to extended infection periods, use another registered fungicide for additional applications once the maximum amount of this product has been used. If resistant isolates to Group 11 fungicides are present, product performance may be reduced for certain diseases. When heavy infection pressure exists, when treating varieties highly susceptible to disease, or when environmental conditions are conducive to disease development, best results are obtained when using the higher rates and/or the shorter spray intervals allowed in the crop specific use directions on this label..

MIXING AND APPLICATION INSTRUCTIONS

Spray Equipment

All types of spray equipment commonly used for ground and aerial applications may be used with this product. Proper adjustment and calibration of spraying equipment to give good canopy penetration and coverage is essential for good disease control.

Nozzles

- Equip sprayers with nozzles that provide accurate and uniform application.
- Use nozzles that are the same size and uniformly spaced across the boom.
- Calibrate sprayer before use.
- Use screens to protect the pump and to prevent nozzles from clogging.
- Use screens 16-mesh or coarser on the suction side of the pump.
- Do not place a screen in the recirculation line.
- Use 50-mesh or coarser screens between the pump and boom, and where required, at the nozzles.

- Check nozzle manufacturer's use guidelines.

Pump

- Use a pump with capacity to:
  a) Maintain 35 to 40 psi at nozzles.
  b) Provide sufficient agitation in tank to keep mixture in suspension. This requires recirculation of 10% of tank volume per minute.
- Use a jet agitator or liquid sparge tube for agitation.
- Do not air sparge.

For more information on spray equipment and calibration, consult sprayer manufacturers and state agricultural agency for advice. For specific local directions and spray schedules, consult your state agricultural agency for advice.

Spray Solution Preparation

- Proper mixing of this product with water requires use of a spray tank equipped with agitation.
- Prepare only the amount of spray solution required for immediate use. Do not allow spray mixture to stand overnight or for prolonged periods.
- Thoroughly clean spray equipment before preparing the spray solution.
- Maintain constant agitation throughout the spraying operation.
- Rinse spray tank thoroughly with clean water after each day's use and dispose of pesticide rinsate by application to an already treated area

Stand-alone product solution:

- Add ½ to ⅔ of the required amount of water to a spray or mixing tank and begin agitation.
- Add the specified amount of this product to the tank.
- Continue agitation while adding the remainder of the water and allow time for good dispersion.
- Begin application of the spray solution after the product has completely dispersed in the mix water and maintain agitation during spraying.

Tank mixture with other products:

- Add ½ to ⅔ of the required amount of water to a spray or mixing tank and begin agitation.
- Add tank mix partners to the tank in the following order: 1) wettable powder and water dispersible granule (WDG) formulations, 2) liquid flowables (aqueous suspensions), and 3) emulsifiable concentrates.
- Allow the material to completely dissolve and disperse into the mix water.
- Continue agitation while adding the remainder of the water and this product to the tank mix and allow time for good dispersion
- Begin application of the spray mixture while maintaining agitation.

Compatibility

This product is compatible with many pesticides and additives commonly used in tank mixtures. To determine the physical compatibility of this product with other products prior to full scale use, conduct a jar test as follows: Using a quart jar, add the proportionate amounts of the tank mixture components to 1 qt. of water. Add wettable powders and water dispersible granule (WDG) products first, then liquid flowables, and emulsifiable concentrates last. Mix thoroughly and let stand for at least 5 minutes. If the combination remains mixed or can be remixed readily, it is physically compatible. Once compatibility has been confirmed, use the same procedure for adding required ingredients to the spray tank.

NOTE: Some phytotoxicity may be observed when applying tank mixtures of this product with emulsifiable concentrate (EC) formulations. These effects may be enhanced if applications are made under cool, cloudy conditions and these conditions remain for several days following application. In addition, adjuvants that contain some forms of silicone may also contribute to phytotoxicity.

INSTRUCTIONS FOR USE THROUGH IRRIGATION SYSTEMS (CHEMIGATION)

- Use only on crops for which chemigation is specified on this label.
- Apply this product through 1) sprinkler irrigation systems including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move; 2) drip irrigation systems. Do not apply this product through any other type of irrigation system.
- Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water
- Apply in 0.1-0.25 inches of water per acre. Excessive water may reduce efficacy

- If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers, or other experts.
- Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.
- A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

Spray Preparation: Clean chemical tank and injector system thoroughly. Flush system with clean water.

Drip Irrigation: This product may be applied through drip irrigation systems for soil-borne disease control. The soil should have adequate moisture capacity prior to drip application.

Terminate drip irrigation at fungicide depletion from the main feed supply tank or after 6 hours from start, whichever is shorter. For maximum efficacy, delay subsequent irrigation (water only) for at least 24 hours following drip application.

Sprinkler Irrigation

Apply this product through sprinkler irrigation systems including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move. Apply with center pivot or continuous-move equipment distributing 1/2 acre-inch or less during treatment. In general, use the least amount of water required for proper distribution and coverage. If stationary systems (solid set, handlines or wheel lines other than continuous-move) are used, inject this product into no more than the last 20-30 minutes of the set.

Do not apply when winds are greater than 10-15 mph to avoid drift or wind skips. Do not apply when wind speed favors drift beyond the area intended for treatment.

Plant injury, lack of effectiveness, or illegal pesticide residues in the crop may result from non-uniformly treated water. Thorough coverage of foliage is required for good control. Good agitation should be maintained during the entire application period.

If you have questions about calibration, contact your State Extension Service specialist, equipment manufacturer or other experts.

Operating Instructions:

1. Do not apply when wind speed favors drift beyond the area intended for treatment.
2. The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water-source contamination from backflow.
3. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
4. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
5. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
6. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
7. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
8. Allow sufficient time for pesticide to be flushed through all lines and all nozzles before turning off irrigation water. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.
9. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

Center Pivot Irrigation Equipment

Notes: (1) Use only with drive systems which provide uniform water distribution. (2) Do not use end guns when applying this product through center pivot systems as it may result in non-uniform application.

- Determine the size of the area to be treated.
- Determine the time required to apply 1/8 to 1/2 inch of water over the area to be treated when the system and injection equipment are operated at normal pressures as specified by the equipment manufacturer. When applying this product through irrigation equipment use the lowest obtainable water volume while maintaining uniform distribution. Run the system at 80-95% of the manufacturer's rated capacity.
- Using water, determine the injection pump output when operated at normal line pressure.
- Determine the amount of product required to treat the area covered by the irrigation system.
- Add the required amount of product and sufficient water to meet the injection time requirements to the solution tank.
- Make sure the system is fully charged with water before starting injection of the spray solution. Time the injection to last at least as long as it takes to bring the system to full pressure.
- Maintain constant agitation of the spray solution during the injection period.
- Continue to operate the system until the spray solution has cleared the sprinkler head.

Solid Set, Hand Move, and Moving Wheel Irrigation Equipment

- Determine the acreage covered by the sprinklers.
- Fill injector solution tank with water and adjust flow rate to use the contents over a 20 to 30-minute interval. When applying this product through irrigation equipment, use the lowest obtainable water volume while maintaining uniform distribution.
- Determine the amount of product required to treat the area covered by the irrigation system.
- Add the required amount of product into the same quantity of water used to calibrate the injection period.
- Operate the system at the same pressure and time interval established during the calibration.
- Stop injection equipment after treatment is completed. Continue to operate the system until the spray solution has cleared the last sprinkler head.

Specific Instructions for Public Water Systems

1. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
2. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, back-flow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, discharge the water from the public water system into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
3. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
4. The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
5. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. Do not apply when wind speed favors drift beyond the area intended for treatment.

SPECIFIC USE DIRECTIONS

TURF:
UPGRADE may be used for control of certain pathogens causing foliar, stem, and root diseases, including leaf and stem blights, leaf spots, patch diseases, mildews, anthracnose, fairy rings, molds, and rusts of turfgrass plants. UPGRADE may be used to control certain diseases on turf in golf courses, lawns and landscape areas around residential, institutional, public, commercial and industrial buildings, parks, recreational areas and athletic fields.

Integrated Pest (Disease) Management (IPM): Sound turf management resulting healthy, vigorous turf is the foundation of a good IPM program. Cultural practices such as proper choice of turf variety, nutrient-management, proper cutting height, thatch management, and proper watering, drainage, and moisture stress management should be integrated with the use of fungicides to increase turf vigor and reduce the susceptibility to disease, immunoassay detection kits and extension service diagnostic services can assist in the early and accurate identification of causal organisms and corresponding selection of the proper fungicide when required.

Resistance Management: Some turf disease pathogens are known to have developed resistance to products used repeatedly for their control. UPGRADE should be applied at full use rates in a tank mix or alternation program with other registered fungicides that have a different mode of action and to which pathogen resistance has not developed. Since UPGRADE is a strobilurin fungicide, avoid alternation with other strobilurins, such as kresoxim-methyl and trifloxystrobin. Do not apply more than two [2] sequential UPGRADE applications for Gray Leaf Spot and *Pythium spp.* control. For all other diseases when Gray Leaf Spot and *Pythium spp.* are not present, do not apply more than three sequential applications of UPGRADE.

DIRECTIONS FOR APPLICATION FOR TURF DISEASES

Application Directions: UPGRADE should be applied prior to disease development. Mix UPGRADE with the required amount of water and apply as a dilute spray application in 1 to 3 gals. of water per 1000 sq. ft. (44-132 gals./A). Repeat applications at specified intervals for as long as required. For spot treatments, use **0.38** fl. oz. UPGRADE per 1 to 3 gals. of water. Do not apply more than **2.4** gals. product/acre/year (**7.1** fl. oz. product/1000 sq. ft./year). Applications may be made by ground only.

Dollar Spot: UPGRADE does not control dollar spot. During periods of dollar spot pressure, always mix UPGRADE with **Legend®**, **Spectro™**, **26/36®** or another dollar spot control fungicide. UPGRADE is compatible in tank mixes with many other fungicides that control dollar spot.

Target Diseases	Use Rate (fl. oz. product per 1000 sq. ft.)	Application Interval (days)	Remarks*
Anthracnose *(Colletotrichum graminicola)*	0.38-0.77	14-28	Use preventatively. Begin applications when conditions are favorable for disease infection, prior to disease symptom development.
Brown Patch *(Rhizoctonia solani*	0.38-0.77	14-28	Apply when conditions are favorable for disease development.
Cool Weather Brown Patch Yellow Patch *(Rhizoctonia cerealis)*	0.77	28	Make one or two applications in fall or when conditions are favorable for disease development.

Fairy Ring *(Lycoperdon* spp., *Agrocybe pediades, and* *Bovistra plumbea)*	0.77	28	For prevention in Cool season turf, initiate applications in the spring when root zone soil temperatures reach 55-60° F. Make a second application using a 28day interval. Immediately after fungicide is applied, irrigate the area with sufficient water to move the active ingredient down into the crown and active root zone of the turf. The amount of water is dependent on the depth of the root zone. Do not use a wetting agent unless hydrophobic soil conditions exist. Fairy ring symptoms may take 2 to 3 weeks to disappear following application. Alternate with another fungicide with a different mode of action, such as Affirm®, Torque® or Prostar®. For hydrophobic areas, Use an appropriate wetting agent to effectively penetrate the hydrophobic zone commonly created with this disease.
Fusarium Patch *(Microdochium nivale)*	0.38-0.77	14-28	Use preventatively. Begin applications when conditions are favorable for disease infection, prior to disease symptom development.
Gray Leaf Spot *(Pyricularia grisea)*	0.38-0.77	14-28	Begin applications before disease is present and continue applications while conditions are favorable for disease development.
Leaf Rust Stem Rust Stripe Rust *(Puccinia* spp.)	0.38-0.77	14-28	Begin applications when conditions are favorable for disease infection, prior to disease symptom development.
Leaf Spot *(Bipolaris sorokiniana)*	0.38-0.77	14-21	Apply when conditions are favorable for disease development.
Melting Out *(Drechslera poae)*	0.38-0.77	14-21	Apply when conditions are favorable for disease development
Necrotic Ring Spot *(Leptosphaeria korrae)*	0.77	14-28	Apply when conditions are favorable for disease development.
Pink Patch *(Limonomyses roseipellis)*	0.38-0.77	14-28	Apply when conditions are favorable for disease development.
Powdery Mildew *(Erysiphe graminis)*	0.38-0.77	14-28	Begin applications when conditions are favorable for disease infections prior to disease symptom development.
Pythium Blight Pythium Root Rot *(Pythium aphanidermatum, Pythium* spp.)	0.77	10-14	Use preventatively. Begin applications when conditions are favorable for disease infection, prior to disease symptom development. During periods of prolonged favorable conditions, treat on the 10 day application interval. For use on newly seeded as well as established turf.
Red Thread *(Laetisaria fuciformis)*	0.38-0.77	14-28	Apply when conditions are favorable for disease development.
Rhizoctonia Large Patch *(Rhizoctonia solani)*	0.77	14-28	Make one or two applications in fall or when conditions are favorable for disease development.
Southern Blight *(Sclerotium rolfsii)*	0.38-0.77	14-28	Apply when conditions are favorable for disease development.
Spring Dead Spot *(Leptosphaeria korrae)* or *(Gaeumannomyces graminis var. graminis)* or *(Ophiosphaerella herpotricha)*	0.77	14-28	Apply applications approximately when soil temps in the root zone reach 80°F or approximately two months prior to bermudagrass dormancy. Water application into root zone. 1/4" to 1/2" of irrigation directly after application is recommended. Reapply 14 to 28 days later. Tank mixing with other SDS products such as Torque may enhance control under severe disease pressure.

Snow Molds Gray Snow Mold, Typhula Blight *(Typhula incarnata)* Pink Snow Mold *(Microdochium nivale)*	0.77 - 1.35	single application	Make a single application of 0.77 - 1.35 fl. oz. in late fall just before snow cover. Tank mixing with other snow mold fungicides, such as Torque, 26/36, Legend, or Spectro may enhance control under severe disease pressure.
Summer Patch *(Magnaporthe poae)*	0.38-0.77	14-28	Apply when conditions are favorable for disease development.
Take-all Patch *(Gaeumannomyces graminis var. avenae)*	0.77	28	Begin applications when conditions are favorable for disease infection, prior to disease symptom development. Make two applications, 28 days apart in the spring and two applications 28 days apart in the fall.
Zoysia Patch *(Rhizoctonia solani and/or Gaeumannomyces incrustana)*	0.38-0.77	14-28	Apply 1 or 2 applications approximately one month prior to zoysiagrass dormancy. Reapply 14 to 28 days later.

*Do not apply more than two sequential applications of UPGRADE for control of Gray Leaf Spot and *Pythium* spp. For all other diseases when Gray Leaf Spot and *Pythium* spp. are not present, do not apply more than three sequential applications of UPGRADE.

UPGRADE Rate Conversion Chart for Turf

Fl. Oz. Product Per 1000 Sq. Ft.	Fl. Oz. Product per Acre	Pints Product Per Acre
0.38	16.6	1.03
0.58	25.3	1.58
0.77	33.5	2.10
0.96	41.8	2.61
1.15	50.1	3.13
1.35	58.8	3.67

Small Volume Application - Amount of UPGRADE to Mix per Gallon for Turf Applications

UPGRADE Use Rate fl. oz./1000 sq. ft.	Amount UPGRADE per volume [milliliters]		
	1 gallons	3 gallons	5 gallons
0.38	11.2	33.6	56.0
0.58	17.2	51.6	86.0
0.77	22.8	68.4	114.0
0.96	28.4	85.2	142.0
1.15	34.0	102.0	170.0
1.35	39.9	119.7	199.5

ORNAMENTALS

UPGRADE is recommended for control of certain pathogens causing foliar, aerial, and root diseases, including leaf, tip, and flower blights, leaf spots, downy mildew, powdery mildew, anthracnose, and rusts of ornamental plants. UPGRADE may be used to control listed diseases of herbaceous, deciduous and evergreen ornamentals and listed vegetable seedlings and transplants grown in greenhouses, lath houses, hoop houses, high tunnel and shadehouses, and herbaceous, deciduous and evergreen ornamentals grown in field, container, nurseries, retail nurseries, and other residential and commercial landscape areas. Do not use this product for the production of edible crops or food.

Do not exceed 2.4 gallons product/crop acre/year or 8 applications/crop/year.
Do not exceed 600 gallons spray volume per acre for foliar applications.
Do not exceed 2 pints volume per square foot for drench and crown applications,

Integrated Pest (Disease) Management:
UPGRADE should be integrated into an overall disease management strategy that includes selection of varieties with disease tolerance, optimum plant populations, proper fertilization, winter and/or spring pruning, plant residue management and proper timing and placement of irrigation.

Resistance Management: Some ornamental disease pathogens are known to have developed resistance to fungicides used repeatedly for their control. UPGRADE should be applied in an alternation or tank mix program with other registered fungicides that have a different mode of action and to which pathogen resistance has not developed. Do not make more than two (2) sequential applications of UPGRADE before alternating with a fungicide of a different mode of action. Do not alternate UPGRADE with other FRAC 11 or strobilurin fungicides.

Application Directions: Apply UPGRADE as a broadcast or banded spray targeted at the foliage or crown of the plant. Apply to runoff in sufficient water to ensure complete coverage of the target plant. Good coverage and wetting of foliage is necessary for best control. Refer to the label for specific use directions for control of certain diseases. Repeat applications at specified intervals (plus alternations for resistance management) for as long as required. Applications may be made by ground only.

UPGRADE applications should begin prior to disease development and continue throughout the season at specified intervals following resistance management guidelines. UPGRADE works best when used as part of a preventative disease management program.

Use only surfactants approved for ornamental plants in combination with UPGRADE. Do not use silicone based products with Heritage Fungicide due to possible phytotoxicity. Always test tank mixes on a small group of representative plants prior to broad scale use.

Apply UPGRADE at use rates of 1.9-7.7 fluid ounces/100 gallons every 7-28 days (or as otherwise specified for a specific plant or disease). The addition of a non-silicone based wetter-sticker at the recommended use rate may enhance coverage on hard-to-wet plant foliage.

Under most conditions and for most diseases, apply 3.9-7.7 fluid ounces/ 100 gallons on a 7-14 day interval.

Under light to moderate disease pressure, use the lower rates (1.9-3.9 fl oz/100 gallons) on a 7-14 day interval or the higher rates (5.8-7.7 fl oz/100 gallons) on a longer 14-28 day interval.

Under environmental conditions which promote severe disease development, use the higher rates (5.8-7.7 fl oz/100 gallons) on a 7-14 day interval. Use of UPGRADE as a "rescue" (late curative or eradicant) treatment may not always result in satisfactory disease control.

In addition, do not tank mix UPGRADE with other fungicides, insecticides, herbicides, fertilizers, adjuvants, etc, unless local experience indicates that the tank mix is safe to ornamental plants.

Drench Application: UPGRADE may be applied to control soilborne, seedling, and crown diseases of production ornamentals (greenhouse, hoop house, lath house, shadehouse, and field or container grown) as a preventative, drench treatment prior to infection. Good coverage of the pre-infection area (root zone, root ball, crown, etc.) is necessary for satisfactory control. UPGRADE may be drench applied to container grown ornamentals using 0.39-1.7 fluid ounces/100 gallons of water. Apply 1-2 pints of the solution per square foot surface area on a 7-28 day interval. Apply drench prior to infection as healthy roots are necessary to optimize product uptake, systemic translocation and disease protection. For resistance management do not make more than three sequential drench applications of UPGRADE before alternating with a fungicide of a different mode of action. Caution should be taken before making application of UPGRADE as a drench to small bedding plants in the seedling/plug stage due to possible phytotoxicity. A limited quantity of plants should be tested prior to full-scale application.

Drip Irrigation: UPGRADE may be applied through drip irrigation systems to potted ornamentals or to bedded, field grown ornamentals for soil-borne disease control. Apply 3.9-30.8 fluid ounces UPGRADE per acre as a preventative disease application. The soil or potting media should have adequate moisture capacity prior to drip application. Terminate drip irrigation at fungicide depletion from the main feed supply tank or after 6 hours from start, whichever is shorter. For maximum efficacy, subsequent irrigation (water only) should be delayed for at least for 24 hours following drip application.

Ornamental Use Precautions

Do not apply UPGRADE to apple or cherry trees (Flowering, Yoshina variety) due to possible phytotoxicity. Furthermore, do not use spray equipment that has applied UPGRADE for use in these sensitive crops due to possible phytotoxicity from residue remaining in the sprayer. UPGRADE may be applied to certain varieties of crabapple for control of apple scab. UPGRADE has been shown to be safer when applied to the species and varieties listed in Table 4. However, due to the large number of genera, species, and varieties of crabapple, it is impossible to test every one for tolerance to UPGRADE. The professional user should conduct small scale testing to insure plant safety prior to broadscale commercial use on plant genera and species not listed on this label.

TABLE 1: Diseases Controlled: When used in accordance with the label directions, UPGRADE will provide control of the following diseases of ornamental plants:

Disease [Pathogen]	Use Rates and Specific Instructions [fluid ounces product per 100 gallons]
[1] CONIFER BLIGHTS Phomopsis Blight (Phomopsis juniperovora) Tip Blight (Sirococcus strobilinus)	1.9 – 7.7 fl oz every 7-28 days
[2] LEAF BLIGHTS/LEAF SPOTS Alternaria Leaf Spot (Alternaria spp.) Anthracnose (Colletotrichum spp., Elsinoe spp.)	1.9 – 7.7 fl oz every 7-28 days
Downy Mildew of Rose (Peronospora sparsa)	3.9 – 7.7 fl oz every 7-21 days during periods of active plant growth and prior to dormancy or severe infection.
Entomosporium Leaf Spot (Entomosporium mespili)	1.9 – 7.7 fl oz every 7-28 days
Iris Leaf Spot (Mycosphaerella macrospora)	3.9 – 7.7 fl oz every 7-28 days
Leaf spot (Cladosporium echinulatum)	1.9 – 7.7 fl oz every 7-28 days
Rose Blackspot (Diplocarpon rosea)	7.7-15.4 fl oz every 7-14 days. Under severe disease conditions or if disease is already present, UPGRADE may be tank mixed with other fungicides such as Protect, Legend, or 3336 for enhanced disease management. Do not exceed 46 fl oz/acre/application.
Myrothecium leaf spot (Myrothecium spp.)	3.9-7.7 fl oz every 7-21 days
Downy Mildew of bedding plants (Peronospora spp.)	1.9-7.7 fl oz every 7-28 days
Scab (Venturia inaequalis)	**For crabapples only, see Table 4 for tolerant species. Do not apply to apple trees.** 1.9 – 7.7 fl oz every 10-28 days.
Marrsonina Leaf Spot (Marsonina spp.)	1.9 – 7.7 fl oz 14-28 days.
Cercospora Leaf Spot (Cercospora sp.)	1.9 – 7.7 fl oz 7-28 days.
[3] POWDERY MILDEW Erysiphe pannosa, Erysiphe spp. Microsphaera azaleae Sphaerotheca pannosa	Preventative applications only. Do not make more than 2 sequential applications before rotating to another class of fungicide. 1.9 – 7.7 fl oz every 7-28 days
[4] RUSTS Needle Rust (Melampsora occidentalis) Phragmidium spp. Pucciniaspp. Gymnosporagium spp.	1.9 – 7.7 fl oz every 7-28 days. Alternation with a DMI Class fungicide such as Torque can enhance disease management.
[5] FLOWER BLIGHTS Anthracnose (Collectotrichum spp., Elsinoe spp.)	1.9 – 7.7 fl oz every 7-28 days

Botrytis Blight (Botrytis cinerea)	For suppression only. 7.7-15.4 fl oz every 7-21 days. Do not exceed 46 fl oz/acre. Rotation or tank mixing with other fungicides such as Protect, Legend, Spectro, Affirm, or 3336 will enhance disease management.
[6] SHOOT/STEM DISEASES Aerial/Shoot Blight (Phytophthora spp.)	1.9-3.9 fl oz every 7-28 days
[7] SOILBORNE DISEASES [Directed Spray] Rhizoctonia solani Sclerotium rolfsii Fusarium spp.	Apply as a directed spray to the soil surface and lower stem and crown area of the plant. 1.9 – 7.7 fl oz every 7-21 days.
[8] SOILBORNE DISEASES [Drench] Rhizoctonia solani Sclerotium rolfsii Fusarium spp.	0.39-1.7 fl oz [11-51 mL] Apply 1-2 pints of the solution per square foot surface area, every 7-28 days. See Ornamentals Section for additional drench directions.

PLANT SAFETY: UPGRADE has been shown to be safe when applied to the ornamental plants listed in Tables 2 and 3. However, due to the large number of genera, species and varieties of ornamental and nursery plants, it is impossible to test every one for tolerance to UPGRADE. Neither the manufacturer nor the seller has determined whether or not UPGRADE can be used safely on genera, species, or varieties of ornamental and nursery plants not specified on this label. The professional user should conduct small scale testing to insure plant safety prior to broad scale commercial use on plant genera and species not listed in this label. In addition, do not tank mix UPGRADE with other fungicides, insecticides, herbicides, fertilizer, adjuvants, etc, unless local experience indicates that the tank mix is safe to ornamental plants.

Do not apply UPGRADE to certain apple, crabapple, or cherry trees due to possible phytotoxicity. Furthermore, do not use spray equipment that has applied UPGRADE for use in these sensitive crops due to possible phytotoxicity from residue remaining in the sprayer.

Tolerant Ornamental Plants: UPGRADE has been found to be safe when applied to the plants listed in Tables 2 and 3 when applied according to recommended application methods, rates, and timings.

TABLE 2; Tolerant Plants Listed by Botanical Name

BOTANICAL NAME	COMMON NAME	DISEASES
Abelia spp.	Abelia	2
Abies fraseri	Fraser fir	1,4
Abies procera	Noble Fir	1,4
Acer palmatum	Japanese maple	2
Acer saccharum	Sugar maple	2
Ageratum spp.	Floss-Flower	3,4
Ageratum spp.	Pussy's-Foot	3,4
Aglaonema spp.	Chinese evergreen	2,4
Ajuga reptans	Bugle, Bugleweed	3
Antirrhinum spp.	Snap-Dragon	2[DM],3,4
Aphelandra spp.	Zebra-Plant	2
Artemisia spp.	Mugwort, Sagebrush	2
Artemisia spp.	Wormwood	2
Aster spp.	Aster, Starwort	4
Aucuba japonica	Japanese aucuba, Japanese laurel	7
Begonia spp. (except Rieger begonia)	Begonia	2,3
Berberis thunbergii	Barberry	3,4
Betula nigra	River birch	3,4
Bougainvillea spp.	Bougainvillea	2
Brassaia actinophylla	Rubber-tree, Umbrella-tree	2,7

Buddleia davidii	Buddleia, Butterfly-bush	2
Buxus sempervirens	Boxwood	2,7 [Rhizoctonia]
Caladium spp.	Caladium	7
Camellia japonica	Camellia	2
Caryota urens	Sago Palm	2,7
Catharanthus roseus	Vinca	2
Ceanothus sanguineus	Wild lilac	3
Ceanothus spp.	Ceanothus, California lilac, Snowball	3
Cedrus atlantica	Atlas cedar	2,4
Cedrus spp.	White cedar	2,4
Cercis occidentalis	Western redbud	2
Chamaecyparis spp.	Cypress, Leyland cypress	1
Chamaecyparis pisifera	Sawara cypress	1
Chamaedora elegans	Parlor palm	7
Chrysanthemum spp.	Chrysanthemums	2, 7 [Fusarium]
Clethra alnifolia	Clethra, White alder	2
Cornus spp.	Dogwood, Pink dogwood, Flowering dogwood	2[Anthracnose],3
Cornus florida	Dogwood	2 [Anthracnose],3
Cortaderia selloana	Pampas grass	3
Cotoneaster adpressus	Creeping Cotoneaster	7
Cotoneaster horizontalis	Cotoneaster – variegated rockspray	7
Cyclamen spp.	Cyclamen	7 [Fusarium]
Cyperus spp.	Cyperus	1
Delphinium spp.	Larkspur	2
Dianthus caryophyllus	Carnation	3,4
Dianthus spp.	Pink	3,4
Dieffenbachia spp.	Oumb-Cane	2
Dietes iridiodes	African iris, Butterfly iris	4 [Puccinia]
Digitalis spp.	Foxglove	2,3
Epipremnum spp.	Pothos	2
Erica dareyensis	Heather	2
Euonymus alata	Dwarf winged euonymus	2
Euonymus alatus	Burning bush	2
Euonymus 15ndromeda	Evergreen euonymus	2
Euphorbia spp.	Poinsettia	2 [Alternaria]
Fatsia japonica	Japanese fatsia, Paper-plant	2
Ficus spp.	Fig	2
Forsythia viridissima	Forsythia	2
Gaillardia spp.	Blanket-Flower	2
Gardenia jasminoides	Gardenia	3
Geranium spp.	Cranesbill	5 [Botrytis]
Gerbera jamesonii	Gerber daisy, Transvaal daisy	3
Hedera algeriensis	Algerian ivy	2
Hedera helix	English ivy	2
Hibiscus moscheutos	Hibiscus	2,3
Hibiscus rosa-sinensis	Hibiscus	2,3
Hibiscus syriacus	Rose of Sharon	2,3
Hosta spp.	Hosta	2
Hydrangea macrophylla	French hydrangea	2,3
Hydrangea spp.	Hydrangea	2,3
Ilex spp.	Holly, Winterberry, Yaupon	3
Impatiens spp.[1]	Balsam, Impatiens[1]	2 [Alternaria], 7 [Rhizoctonia
Iris xiphium	Iris (bulbous, Spanish, Dutch)	2 [Iris Leaf Spot]
Itea virginica	Virginia willow	3,4
Juniperus procumbens	Juniper	1 [Phomopsis], 4
Juniperus scopulorum	Juniper	1 [Phomopsis], 4
Juniperus spp.	Juniper	1 [Phomopsis],4

Juniperus virginiana	Red cedar	1 [Phomopsis],4
Lagerstroemia indica	Crapemyrtle	2,3
Laurus nobilis	Laurel	3
Lilium spp.	Asiatic Lily	2
Liriope muscari	Lily-turf	2
Lobulaha maritime	Sweet alyssum	7
Magnolia grand/flora	Southern magnolia	2
Magnolia soulangiana	Saucer magnolia	2
Magnolia spp.	Magnolia	2
Malus spp.	Crabapple (See Table 4 for variety list)	2 [Scab]
Nandina domestica	Nandina	2
Nerium oleander	Oleander, Rose-bay	2
Pelargonium spp.	Geranium	3, 4, 5 [Botrytis]
Pennisetum alopecuroides	Grass	2
Peperomia spp.	Baby rubber-plant	2,7
Petunia spp.	Petunia	6
Phalaris spp.	Dwarf pampas grass	3
Philodendron spp.	Philodendron	2
Phlox spp.	Phlox	3
Phoenix dactylifera	Date palm	2,7
Phoenix roebelenii	Roebelin's palm	2,7
Photinia glabra	Red-tip photinia	2,3,4
Picea abies	Norway spruce	1
Picea glauca	White spruce	1
Picea pungens	Blue spruce	1
Pieris japonica	Japanese Andromeda	2,7
Pinus muhgo	Muhgo pine	1 [Tip Blight], 4
Pinus nigra	Black pine	1 [Tip Blight, 4
Pinus silvestris	Scotch pine	1,4
Pinus spp.	Pine	1 [Tip Blight],4
Pinus 16ndrome	Eastern white pine	1 [Tip Blight],4
Pittosporum spp.	Australian laurel	3,4
Pittosporum tobira	Mock-orange	3,4
Plectranthus spp.	Swedish ivy, Coleus	2
Populus trichocarpa	Poplar	4
Populus spp.	Aspen Trees	2
Potentilla spp.	Cinquefoil	2
Primula spp.	Primrose	2
Prunus pumila	Cherry	2,5
Prunus spp.	Flowering plum, Purple-leaf plum	2,5
Pseudotsuga spp.	Douglas fir	1.4
Pyrus calleryana	Bradford's pear	3
Quercus 16ndrome	Red oak	2,3
Quercus palustris	Pin oak	2,3
Rhaphiolepsis indica	Indian hawthorn	2,3,4
Rhododendron spp.	Azaleas, Rhododendron	2[Anthracnose],3,6,7
Rhododendron spp.	Glacier Azalea	2[Anthracnose],3,6,7
Rosa spp.	Rose	2 [Alternaria, Downy Mildew, 3 [Sphaerotheca], 4 [Phragmidium]
Rosmarinus spp.	Rosemary (prostrate)	2
Rudbeckia hirta	Black-eyed-susan	2
Salvia spp.	Sage	3,4
Schlumbergera	Holiday cactus	2,7
Sedum spp.	Orpine, Stonecrop	2
Sempervivum spp.	Live-forever, House-Leek	2
Setaria spp.	Ribbon-grass	2,3
Spathiphyllum floribundium	Peace lily	2,7

Spirea budalda	Spirea	3
Spirea japonica	Spirea	3
Syagrus romanzoffianum	Queen palm	2
Tagetes spp.	Marigold	2 [Alternaria]
Taxus baccata	Spreading yew	7
Thuja plicata	Western Red Cedar	4
Thujopsis spp.	Arborvitae	2
Thymus serphyllum	Creeping thyme	2
Tsuga heterophylla	Western Hemlock	4
Tsuga spp.	Hemlock	4
Verbena spp.	Verbena, Vervain	3
Viburnum spp.	Viburnum	2,3,4
Vinca spp.	Periwinkle	2,6
Viola spp. [1]	Viola, Pansy [1]	2
Wiegela florida	Pink wiegela	2
Yucca spp.	Yucca	7
Zinnia spp.	Zinni	2 [Alternaria],3

Footnotes: [1] Do not exceed 3.9 fl oz/100 gallons on indicated species

TABLE 3: Tolerant Varieties of Crabapple and Other Malus Species

Arkansas Black	Eleyi	Mary Potter	*M. seiboldii*
M.atrosanguinea	Enterprise	Molten Lava	Selkirk
M. baccata	Evereste	New Centennial	Sentinel
M. baccata var. jackii	Eyelynn	Ormiston Roy	Silver Moon
M. baccata var. mandshurica	*M. floribunda*	Pink Satin	Silverdrift
Callaway	Gloriosa	Prairie Maid	Sinai Fire
Candymint Sargent	Golden Delicious	Prairifire	*M. spectablis*
Christmas Holly	Golden Raindrops	Profusion	Sugar Tyme
M. coronaria	Hopa	*M. pumila*	Van Eseltine
David	Indian Magic	Ralph Shay	White Angel
Dolgo	Island	Red Jade	Williams Pride
Donald Wyman	Katherine	Red Baron	Winter Gold
Dorothea	Lancelot	Sargent	Yellow Delicious
Doubloons	Louisa	*M. sargentii*	*M. zumi Calocarpa*

TABLE 4: Intolerant Plants – **Do Not Apply UPGRADE to these species or varieties.**

COMMON NAME	BOTANICAL NAME
Apple	*Malus domestica*
Crabapple - Flame variety	*Malus spp.*
Crabapple - Brandywine variety	*Malus spp.*
Crabapple - Novamac variety	*Malus spp.*
Cherry, Flowering - Yoshina variety	*Prunus yedoensis.*
Leatherleaf Fern and Other Ferns for cut foliage	*Rumohra adianformis* and other species for cut foliage
Privet	*Ligustrum spp.*

Conifers including Christmas Trees

UPGRADE may be used to control certain diseases on conifers in production (indoor and outdoor) and landscape situations. Please see the Ornamental Section above for more detailed directions for use in landscape situations.

Target Disease	Use Rate fluid ounces product/A (lb a.i/A)	Application Directions
Diplodia tip blight *(Diplodia pinea)* Lophodermium needlecast	6.2-15.4 (0.1-0.25)	Begin applications prior to disease development and continue throughout the season at 7-21-day intervals following the resistance management guidelines. Apply by ground, air, or chemigation. An

(Lophodermium pinastri) Swiss needlecast *(Phaeocrytopus gaumannii)*		adjuvant may be added at label specified rates. Do not make more than two (2) sequential applications of this product or other Group 11 fungicides before alternating with a fungicide that has a different mode of action.
Specific Use Restrictions: Do not exceed 1 gallon of this product/Acre per season.		

COMMERCIAL PRODUCTION ROSES

Target Disease	Use Rate fluid ounces product/A (lb a.i/A)	Application Directions
Downy Mildew *(Peronospora sparsa)* Powdery Mildew *(Spherotheca pannosa)* Rust *(Phragmidium mucronatum, P. tuberculatum, and other Phragmidium spp.* Septoria Leaf Spot *(Septoria rosea)* Alternaria Leaf Spot *(Alternaria alternata)*	3.1-15.4 (0.05-0.25)	Heritage application should begin prior to disease development and continue throughout the season on 7-21 day intervals following the resistance management guidelines. Applications may be made by ground, air or chemigation. An adjuvant may be added at recommended rates. Do not make more than 4 sequential applications of Upgrade before alternating with a fungicide that is not in Group 11. Do not make more than 8 applications per acre per year.
Specific Use Restrictions: Do not exceed 1 gallon of this product/Acre per season.		

BRASSICA - LEAFY GREENS Subgroup 5B

Broccoli Raab; Chinese Cabbage (bok choy); Collards; Kale; Mizuna; Mustard Greens; Mustard Spinach; Rape Greens; all Cultivars and/or Hybrids of these

Target Disease	Use Rate fl oz product/A (lb a.i/A)	Application Directions
Black spot *(Alternaria* spp.) Cercospora leaf spot (*Cercospora* spp.) White rust *(Albugo candida)*	6.0-15.5 (0.10-0.25)	Begin applications prior to disease development and continue throughout the season at 7- to 14-day intervals following the resistance management guidelines. Apply by ground, air, or chemigation. An adjuvant may be added at label specified rates. Do not make more than one application of this product or other Group 11 fungicides before alternating with a fungicide that has a different mode of action.
Soilborne Diseases Seedling Root Rot, Basal Stem Rot (*Rhizoctonia solani*)	0.40-0.80 fl oz/1000 row ft	For soilborne/seedling disease control, see directions and rates under **SOILBORNE/SEEDLING DISEASE CONTROL** section.
Use Limitations: Do not exceed 46 fl oz of this product/Acre per season. Do not exceed the equivalent of 0.75 lb a.i./Acre per season from any azoxystrobin-containing products. Pre-harvest Interval (PHI) = 0 Day.		

CUCURBIT VEGETABLES, Crop Group 9

Cantaloupe; Chayote; Chinese-Waxgourd; Cucumber; Gourds; Honeydew Melon; *Momordica* spp. (bitter melon, balsam apple); Muskmelon; Watermelon; Pumpkin; Squash; Zucchini; Varieties, Cultivars and/or Hybrids of these

Target Disease	Use Rate fl oz product/A (lb a.i/A)	Application Directions
Anthracnose (*Colletotrichum lagenarium*) Belly rot (*Rhizoctonia solani*) Downy mildew (*Pseudoperonospora cubensis*) Gummy stem blight (*Didymella bryoniae*) Leaf spots (*Alternaria* spp., *Cercospora* spp.) Myrothecium canker (*Myrothecium roridum*) Plectosporium blight (*Plectosporium tabacinum*) Powdery Mildew (*Sphaerotheca fuliginea*), (*Erysiphe cichoracearum*) Ulocladium Leaf Spot (*Ulocladium cucurbitae*)	6.0-15.5 (0.10-0.25)	For downy mildew and powdery mildew, make preventative applications at 5- to 7-day intervals. For belly rot control, make the first application at the 1-3 leaf crop stage with a second application just before vines tip over or 10-14 days later, whichever occurs first. For all other diseases, begin applications prior to disease development and continue throughout the season at 7- to 14-day intervals following the resistance management guidelines. Apply by ground, air, or chemigation. An adjuvant may be added at label specified rates. Do not tank mix this product with crop oil concentrates (COC), methylated spray oil (MSO) or silicon adjuvants. Do not tank mix this product with malathion, Kelthane®, Thiodan®, Phaser®, Lannate®, Lorsban®, M-Pede® or Botran®. Do not make more than one application of this product or other Group 11 fungicides before alternating with a fungicide that has a different mode of action. Do not make more than four (4) foliar applications of this product or other Group 11 fungicides per crop per acre per year.
Soilborne diseases Rhizoctonia root rot (*Rhizoctonia solani*)	0.4-0.8 fl oz/1000 row ft	For soilborne/seedling disease control, see directions and rates under **SOILBORNE/SEEDLING DISEASE CONTROL** section.
Use Limitations: Do not exceed 92.3 fl oz of this product/Acre per season. Do not exceed the equivalent of 1.5 lb a.i./Acre per season from any azoxystrobin-containing products. Pre-harvest Interval (PHI) = 1 Day.		

FRUITING VEGETABLES – PEPPER / EGGPLANT Subgroup 8-10B *

African Eggplant; Bell Pepper; Eggplant; Martynia; Nonbell Pepper; Okra; Pea Eggplant; Pepino; Roselle; Scarlet Eggplant; Cultivars, Varieties, and/or Hybrids of these

For use on tomatoes, see crop specific Application Directions for Tomato Subgroup 8-10A

Target Disease	Use Rate fl oz product/A (lb a.i/A)	Application Directions
Anthracnose (*Colletotrichum* spp.) Powdery Mildew (*Sphaerotheca* spp.)	6.0-15.5 (0.10-0.25)	Begin applications prior to disease development and continue throughout the season at 7- to 14-day intervals following the resistance management guidelines. Apply by ground, air, or chemigation. An adjuvant may be added at label specified rates. Do not make more than one application of this product or other Group 11 fungicides before alternating with a fungicide that has a different mode of action.
Soilborne diseases Rhizoctonia seedling rot (*Rhizoctonia solani*)	0.4-0.8 fl oz/1000 row ft	For soilborne/seedling disease control, see directions and rates under **SOILBORNE/SEEDLING DISEASE CONTROL** section.
Use Limitations: Do not exceed 61.5 fl oz of this product/Acre per season. Do not exceed the equivalent of 1.0 lb a.i./Acre per season from any azoxystrobin-containing products. Pre-harvest Interval (PHI) = 0 Day.		

HERBS & SPICES (Except Black Pepper), Crop Group 19

Allspice; Angelica; Anise (seed); Anise (star); Annatto (seed); Balm; Basil; Borage; Burnet; Camomile; Caper (buds); caraway; Caraway (black); cardamom; Cassia Bark; Cassia Buds; Catnip; Celery Seed; Chervil (dried); Chinese Chive; Chive; Cinnamon; Clary; Clove Buds; Coriander Leaf (cilantro or Chinese parsley); Coriander Seed (cilantro); Costmary; Culantro (leaf); Culantro (seed); Cumin; Curry (leaf); Dill (dillweed); Dill (seed); Fennel (common); Florence Fennel (seed); Fenugreek; Grains of Paradise; Horehound; Hyssop; Juniper Berry; Lavender; Lemongrass; Lovage (leaf); Lovage (seed); Mace; Marigold; Marjoram; Mustard (seed); Nasturtium; Nutmeg; Parsley (dried); Pennyroyal; Pepper (black and white); Poppy (seed); Rosemary; Rue; Saffron; Sage; Savory (summer and winter); Sweet Bay; Tansy; Tarragon; Thyme; Vanilla; Wasabi, Wintergreen; Woodruff; Wormwood

Target Disease	Use Rate fl oz product/A (lb a.i/A)	Application Directions
Corynespora blight (*Corynespora cassiicola*) Dill blight (*Cercosporidium punctum*) Phoma blight (*Passalora puncta*)	6.0-15.5 (0.10-0.25)	Begin applications at the onset of disease development and continue throughout the season at 7-day intervals following the resistance management guidelines, Apply by ground only. An adjuvant may be added at label specified rates. Use a minimum of 30 gallons of water per acre. Do not make more than two (2) sequential applications of this product or other Group 11 fungicides before alternating with a fungicide that has a different mode of action.
Fusarium Rhizome and Root Rot (*Pythium* spp.)	6.2-15.4 (0.10-0.25)	**For Wasabi only**: Begin applications at the onset of disease development and continue throughout the season at 7-day intervals following the resistance management guidelines, Apply by ground or chemigation. An adjuvant may be added at label specified rates. Use a minimum of 30 gallons of water per acre. Do not make more than two (2) sequential applications of this product or other Group 11 fungicides before alternating with a fungicide that has a different mode of action.
Use Limitations: Do not exceed 92.3 fl oz of this product/Acre per season. Do not exceed the equivalent of 1.5 lb a.i./Acre per season from any azoxystrobin-containing products. Pre-harvest Interval (PHI) = 0 Day.		

LEAFY VEGETABLES (Except Brassica)

Amaranth, Arugula, Cardoon, Celery, Celtuce, Chervil, Chrysanthemum (edible), Corn salad, Cress, Dandelion, Dock, Endive, Fennel, Lettuce (head and leaf), Orach, Parsley, Purslane, Radicchio, Rhubarb, Spinach, Swiss Chard, Cultivars, Varieties, and/or Hybrids of these

Target Disease	Use Rate fl oz product/A (lb a.i/A)	Application Directions
Foliar Diseases Alternaria leaf spot *(Alternaria sonchi, A.* spp.) Anthracnose *(Microdochium panattonianum, Colletotrichum dematium)* Cercospora leaf spot (*Cercospora* spp.) Septoria leaf spot (*Septoria petroselini*) White rust *(Albugo occidentalis)*	6.0-15.5 (0.10-0.25)	<u>For downy and powdery mildew</u>, make preventative applications at 5- to 7-day intervals. <u>For all other diseases</u>, begin applications prior to disease development and continue throughout the season at 7- to 14-day intervals following the resistance management guidelines. Apply by ground, air, or chemigation. An adjuvant may be added at label specified rates. Do not make more than one application of this product or other Group 11 fungicides before alternating with a fungicide that has a different mode of action. **ATTENTION** Applications of this product to leafy vegetable foliage may contribute to foliar phytotoxicity under certain circumstances. Proceed with caution with regard to tank mixes and adjuvants when treating any leafy vegetable crops with this product. When treating leaf lettuce, do not tank mix this product with AMBUSH® WP, Pounce® WP, Aliette®, Warrior® with Zeon ™ Technology, or any other product that may increase the penetration of this product into the leaf surface such as, but not limited to, silicone wetters.
Downy mildew *(Bremia lactucae)* Powdery *mildew* *(Eyrisiphe cichoracearum)*	12.0-15.5 (0.20-0.25)	
Soilborne Diseases Web blight, Bottom rot, Crater rot, Root rot *(Rhizoctonia solani)*	0.4-0.8 fl oz/ 1000 row ft	For soilborne/seedling disease control, see directions and rates under **SOILBORNE/SEEDLING DISEASE CONTROL** section.
Use Limitations: Do not exceed 92.3 fl oz of this product/Acre per season. Do not exceed the equivalent of 1.5 lb a.i./Acre per season from any azoxystrobin-containing products. Pre-harvest Interval (PHI) = 0 Day.		

TOMATO Subgroup 8-10A

Bush Tomato; Cocona; Currant Tomato; Garden Huckleberry; Goji Berry; Groundcherry; Naranjilla; Sunberry; Tomatillo; Tomato; Tree Tomato; Cultivars, Varieties, and/or Hybrids of these

Target Disease	Use Rate fl oz product/A (lb a.i/A)	Application Directions
Anthracnose *(Colletotrichum coccodes)* Black mold *(Alternaria alternata)* Buckeye rot *(Phytophthora spp.)* Early blight *(Alternaria solani)* Powdery Mildew *(Oidiopsis sicula)* Septoria Leaf Spot *(Septoria lycopersici)* Target spot *(Corynespora cassiicola)*	5.0-6.2 (0.08-0.10)	Begin applications prior to disease development and continue throughout the season following the resistance management guidelines. Apply by ground, air, or chemigation. For late blight, apply this product at 5- to 7- day intervals. For all other tomato diseases, make applications at 7- to 21-day intervals. Use of adjuvants may result in severe phytotoxicity. Do not exceed 0.125% adjuvant (v/v). Thank mixtures with dimethoate may cause phytotoxicity. For fresh market tomatoes, do not use adjuvants or tank mix this product with other pesticides formulated as emulsifiable concentrates (EC). Do not make more than one application of this product or other Group 11 fungicides before alternating with a fungicide that has a different mode of action.
Late Blight *(Phytophthora infestans)*	6.2 (0.10)	
Use Limitations: Do not exceed 37 fl oz of product/Acre per season. Do not exceed the equivalent of 0.6 lb a.i./Acre per season from any azoxystrobin-containing product. Pre-harvest Interval (PHI) = 0 Day.		

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage and disposal.

PESTICIDE STORAGE Store in original containers only. Keep container closed when not in use. Do not store near food or feed. In case of spill on floor or paved surfaces, mop and remove to chemical waste storage area until proper disposal can be made if product cannot be used according to the label.

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative of the nearest EPA Regional Office for guidance.

CONTAINER HANDLING:

[**Note to Reviewer:** The following statement will be included on all Final Printed Labels bearing multiple Container Handling statements] **"NOTE:** This product is available in multiple containers. Refer to the Net Contents section of this product's labeling for the applicable "Nonrefillable" or "Refillable" designation. Follow the container handling instructions below that apply to your container type/size."

[Nonrefillable Containers 5 Gallons or Less]

Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. **Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke.

[Nonrefillable containers larger than 5 gallons]

Nonrefillable container. Do not reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure-rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

[Refillable containers larger than 5 gallons]

Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times

WARRANTY DISCLAIMER

The directions for use of this product must be followed carefully. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, (1) THE GOODS DELIVERED TO YOU ARE FURNISHED "AS IS" BY MANUFACTURER OR SELLER AND (2) MANUFACTURER AND SELLER MAKE NO WARRANTIES, GUARANTEES, OR REPRESENTATIONS OF ANY KIND TO BUYER OR USER, EITHER EXPRESS OR IMPLIED, OR BY USAGE OF TRADE, STATUTORY OR OTHERWISE, WITH REGARD TO THE PRODUCT SOLD, INCLUDING, BUT NOT LIMITED TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, USE, OR ELIGIBILITY OF THE PRODUCT FOR ANY PARTICULAR TRADE USAGE. UNINTENDED CONSEQUENCES, INCLUDING BUT NOT LIMITED TO INEFFECTIVENESS, MAY RESULT BECAUSE OF SUCH FACTORS AS THE PRESENCE OR ABSENCE OF OTHER MATERIALS USED IN COMBINATION WITH THE GOODS, OR THE MANNER OF USE OR APPLICATION, INCLUDING WEATHER, ALL OF WHICH ARE BEYOND THE CONTROL OF MANUFACTURER OR SELLER AND ASSUMED BY BUYER OR USER. THIS WRITING CONTAINS ALL OF THE REPRESENTATIONS AND AGREEMENTS BETWEEN BUYER, MANUFACTURER AND SELLER, AND NO PERSON OR AGENT OF MANUFACTURER OR SELLER HAS ANY AUTHORITY TO MAKE ANY REPRESENTATION OR WARRANTY OR AGREEMENT RELATING IN ANY WAY TO THESE GOODS.

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If you do not agree with or do not accept any of the directions for use, the warranty disclaimers, or limitations of liability, do not use the product and return it unopened to the Seller, and the purchase price will be refunded.

(RV030614)

Malone, Erin

From: carrie.tackema@us.nufarm.com
Sent: Thursday, March 06, 2014 9:18 AM
To: Malone, Erin
Cc: rick.fletcher@us.nufarm.com
Subject: RE: Label revisions needed for 228-TEU
Attachments: 000228 00xxx UPGRADE fungicide 030314.pdf.EPA Comments.pdf; 000228.00xxx.UPGRADE fungicide.030614.amend.highlighted.pdf; 000228.00xxx.UPGRADE fungicide.030614.pdf

Hi Erin,

Thank you again for taking the time to walk through the label with us yesterday. Attached is the revised label with the changes we discussed and agreed to. Please let us know if you have any questions or concerns.

Best regards,
Carrie

Nufarm
Carrie M. Tackema
Regulatory Manager
Nufarm Americas, Inc.
4020 Aerial Center Parkway, Suite 101
Morrisville, NC 27560

☎: (919) 379-2528 (Office)
☎: (919) 323-1368 (Cell)
: (919) 467-5923 (Fax)
: carrie.tackema@us.nufarm.com

From: "Malone, Erin" <Malone.Erin@epa.gov>
To: "carrie.tackema@us.nufarm.com" <carrie.tackema@us.nufarm.com>,
Date: 03/05/2014 10:40 AM
Subject: RE: Label revisions needed for 228-TEU

Carrie,

Here is another marked up label. I feel like a few of my comments were missed or done incorrectly. I am still concerned that vegetable seedlings and transplants are showing up in the ornamental section. When we reviewed this application we assumed it was food use. Why would users want to apply to cucurbits and leafy vegetables as a non-food use? Look these over

and call me with questions. PRIA date i. . uesday, 3/11!

Thanks,
Erin

From: carrie.tackema@us.nufarm.com [mailto:carrie.tackema@us.nufarm.com]
Sent: Monday, March 03, 2014 10:05 AM
To: Malone, Erin
Subject: RE: Label revisions needed for 228-TEU

Erin,

Revised labeling is attached.

Best regards,
Carrie

Nufarm
Carrie M. Tackema
Regulatory Manager
Nufarm Americas, Inc.
4020 Aerial Center Parkway, Suite 101
Morrisville, NC 27560

☎: (919) 379-2528 (Office)
☎: (919) 323-1368 (Cell)
: (919) 467-5923 (Fax)
✉: carrie.tackema@us.nufarm.com

From: "Malone, Erin" <Malone.Erin@epa.gov>
To: "carrie.tackema@us.nufarm.com" <carrie.tackema@us.nufarm.com>,
Date: 02/11/2014 01:27 PM
Subject: RE: Label revisions needed for 228-TEU

Carrie,

I have an additional revision for the label:
On page 13, can you please delete references to "sprenching" under [7] Soilborne Diseases? We have determined that this is a new application technique that would need to be fully evaluated by HED before it can be added to the label and does not fall within the PRIA category of this action.

We will also need to discuss renegotiation at this point as the PRIA date is next Tuesday and with the impending snow storm

and holiday weekend we do not even ve a full work week ahead of us. Since I wil, il need to review after your resubmission and my PM will need to do her full review, I think a renegotiation of 3-4 weeks will be necessary. Would you agree to a renegotiated due date of 3/11/14 to allow for your resubmission and another 3 weeks for our review? Please reference D#483695 and product 228-TEU in your response.

Thanks,
Erin

Erin Malone
Risk Manager
EPA/OCSPP/OPP/RD/FB
(703) 347-0253

From: Malone, Erin
Sent: Friday, February 07, 2014 3:07 PM
To: 'carrie.tackema@us.nufarm.com'
Subject: Label revisions needed for 228-TEU

Carrie,

I have finished up my label review for Upgrade Fungicide. I have two questions still pending with HED but wanted to send the label to you know as you will see there are a lot of comments and revisions needed. Please call me if you have questions. I will follow up with you early next week if HED as any concerns with the inquiries I sent up to them.

Thanks,
Erin

Erin Malone
Risk Manager
EPA/OCSPP/OPP/RD/FB
(703) 347-0253

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Nufarm Americas Inc. and its affiliated companies.
Fax: +1 708 377 1333.

- 5 mm for April

Group 11 Fungicide

UPGRADE™ Fungicide

Broad spectrum fungicide for the control of turf and ornamental plant disease, and list vegetable seedlings and transplants grown only in a Greenhouse, Lath house, Shade House, Hoop Structure, or High Tunnel Structure.

ACTIVE INGREDIENT	
Azoxystrobin (methyl (E)-2-{2-[6-(2-cyanophenoxy)pyrimidin-4-yloxy]-phenyl}-3-methoxyacrylate	22.9%
OTHER INGREDIENTS	77.1%
TOTAL	100.0%

Contains 2.04 pounds of active ingredient per gallon

KEEP OUT OF REACH OF CHILDREN.

CAUTION / PRECAUTIÓN

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.
(If you do not understand the label, find someone to explain it to you in detail.)

SEE LABEL BOOKLET FOR FIRST AID AND PRECAUTIONARY STATEMENTS

EPA REG. NO. 228-XXX

EPA Est. No. _____

MANUFACTURED FOR
NUFARM AMERICAS INC.
11901 S. AUSTIN AVENUE
ALSIP, IL 60803

Nufarm

NET CONTENTS: _____ (Gal.) (_____ liters)

[Designation as "NONREFILLABLE" or "REFILLABLE" for containers > 5 GAL]

000228-00XXX.20140303 14.draft

- some states

Summary of Comments on Microsoft Word - 000228.00xxx.UPGRADE fungicide.030314.amend

Page: 1

Author: emalone Subject: Highlight Date: 3/4/2014 12:12:00 PM

Author: emalone Subject: Sticky Note Date: 3/5/2014 9:20:33 AM
The language you added makes it sound like you can apply to vegetables in a greenhouse which there is a restriction against.

Make sure the language is clear as well.

Author: emalone Subject: Cross-Out Date: 3/4/2014 12:12:38 PM

3/5: Call w/ Carrie & Rick

- purpose of label submission
- not have any ag uses (food uses)
- not wanting to produce food in greenhouse. Manage seedling/transplant.
- cited 100-1093
  - full ag label
- twist is time of year they are treating
- other label is food but outdoors.
- push them to [illegible] to grow your own

FIRST AID	
IF ON SKIN OR CLOTHING	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.

HOTLINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact (877) 325-1840 for emergency medical treatment information.

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION / PRECAUCTIÓN

Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemically resistant to this product are listed below. If you want more options follow the instructions for Category A on an EPA chemical resistance category selection chart.

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical resistant gloves made of any waterproof material such as polyvinyl chloride, nitrile rubber or butyl rubber.
- Shoes plus socks

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions exist for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Controls

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240 (d)(4-6), the handler PPE requirements may be reduced or modified as specified in the WPS.

IMPORTANT: When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for "applicators and other handlers" and have such PPE immediately available for use in an emergency, such as a spill or equipment breakdown.

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Wash thoroughly with soap and water after handling.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to freshwater and estuarine/marine fish and aquatic invertebrates. Do not apply directly to water except as specified on this label. For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwater or rinsate.

The active ingredient, azoxystrobin, in this product can be persistent for several months or longer. Azoxystrobin has degradation products which have properties similar to chemicals which are known to leach through soil to ground water under certain conditions as a result of agricultural use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.

Notify State and/or Federal authorities and Nufarm immediately if you observe any adverse environmental effects due to use of this product.

This page contains no comments

PHYSICAL OR CHEMICAL HAZARDS

Do not mix or allow coming in contact with oxidizing agent. Hazardous chemical reaction may occur.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

FAILURE TO FOLLOW THE USE DIRECTIONS AND PRECAUTIONS ON THIS LABEL MAY RESULT IN PLANT INJURY OR POOR DISEASE CONTROL

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), notification to workers, and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water is:

- Coveralls
- Chemical resistant gloves made of any waterproof material such as polyvinyl chloride, nitrile rubber or butyl rubber
- Shoes plus socks

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box only apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Do not treat areas while unprotected humans or domestic animals are present in the treatment areas. Because certain states may require more restrictive reentry intervals, consult your State Department of Agriculture for further information.

Turf and Landscape Uses: Do not enter or allow others to enter the treated area until sprays have dried.

PRODUCT INFORMATION

This product is a suspension concentrate (SC) or flowable formulation. It is a broad spectrum, preventive fungicide with systemic and curative properties recommended for the control of many important plant diseases. This product may also improve the yield and/or quality of the crop. These additional benefits are due to positive effects on plant physiology. The effects may vary according to factors such as the crop, crop hybrid, or environment. This product may be applied as a foliar spray in alternating spray programs or in tank mixes with other registered crop protection products. Make all applications according to the use directions on this label.

USE PRECAUTIONS AND LIMITATIONS

Some phytotoxicity may be observed when applying tank mixtures of this product with emulsifiable concentrate (EC) formulations. These effects may be enhanced if applications are made under cool, cloudy conditions and these conditions remain for several days following application. In addition, adjuvants that contain some forms of silicone may also contribute to phytotoxicity. Do not use this product for the production of edible crops or food.

move to pg. 11

Page: 3

Author: emalone Subject: Pencil Date: 3/4/2014 12:13:31 PM

Author: emalone Subject: Sticky Note Date: 3/5/2014 9:15:02 AM
Add greenhouse restriction that I mentioned in last marked up label.
Between your cited products, only 100-1093 allows use in greenhouses for ornamentals. Add restriction here "Do not use product in greenhouses except for applications to ornamentals."

Author: emalone Subject: Highlight Date: 3/4/2014 12:12:50 PM

Author: emalone Subject: Sticky Note Date: 3/5/2014 9:13:52 AM
You added this and I am not sure I understand why. You have various food crops listed at the end of the label. How can it not be applied to food crops? If you retain this restriction then it should be moved to under PRODUCT INFORMATION and delete the food crops.

ATTENTION

This product is extremely phytotoxic to certain apple varieties.

AVOID SPRAY DRIFT. Extreme care must be used to prevent injury to apple trees (and apple fruit). Refer to SPRAY DRIFT MANAGEMENT information below.

DO NOT spray this product where spray drift may reach apple trees.

DO NOT spray apple trees with spray equipment previously used to apply this product. Even trace amounts of product may cause unacceptable phytotoxicity to certain apple and crabapple varieties.

SPRAY DRIFT MANAGEMENT

The interaction of many equipment and weather related factors determine the potential for spray drift.

DO NOT spray when conditions favor drift beyond the area intended for application. Conditions which may contribute to drift include thermal inversion, wind speed and direction, sprayer nozzle/pressure combinations, spray droplet size, etc. Contact your State Extension agent for spray drift prevention guidelines in your area.

DO NOT apply when weather conditions favor drift from treated areas to non-target aquatic habitat.

AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR.

INTEGRATED PEST MANAGEMENT (IPM)

To reduce the potential for development of resistance, integrate this product into an overall disease and pest management strategy whenever the use of a fungicide is required. Follow cultural practices known to reduce disease development such as selection of disease-tolerant varieties, removal of plant debris in which inoculum overwinters, and proper timing and placement of irrigation. Consult with your State Agricultural Experiment Station or Extension Service specialist for additional IPM strategies established for your area. This product may be used in State Agricultural Extension advisory (disease forecasting) programs which recommend application timing based on environmental factors favorable for disease development.

Crop Tolerance: Plant tolerance has been found to be acceptable for all crops on the label. However, not all possible tank mixture combinations have been tested under all conditions. It is recommended to test tank mixture combinations on a small portion of the crop to assess plant response before large scale applications. See the USE PRECAUTIONS AND LIMITATIONS section for apple phytotoxicity information.

RESISTANCE MANAGEMENT

This product is a Group 11 fungicide. The mode of action for azoxystrobin, the active ingredient in this product, is the inhibition of the QoI (quinone outside) site within the electron transport system as well as disruption of membrane synthesis by blocking demethylation [Group 11]. Fungal pathogens can develop resistance to products with the same mode of action when used repeatedly. Because resistance development cannot be predicted, use this product in accordance with resistance management strategies established for the crop and use area. Consult your local or State agricultural authorities for resistance management strategies that are complementary to those in this label. Resistance management strategies may include alternating and/or tank-mixing with products having different modes of action or limiting the total number of applications per season. Nufarm Americas Inc. encourages responsible resistance management to ensure effective long-term control of the fungal diseases on this label with Group 11 (QoI) fungicides.

Follow the crop specific resistance management recommendations provided in the directions for use.

If no resistance recommendation on number of applications is specified in the directions for use, follow the recommendations in the table below.

If planned total number of fungicide applications per crop is:	1	2	3	4	5	6	7	8	9	10	11	12
Recommended Solo QoI fungicide sprays	1	1	2	2	2	2	2	3	3	3	3	4
Recommended QoI fungicide sprays in mixture (tank-mix or formulated)	1	2	2	2	2	3	3	4	4	5	5	6

This page contains no comments

Under conditions requiring multiple fungicide applications, develop season long spray programs for Group 11 (QoI) fungicides. In crops where two sequential Group 11 fungicide applications are made, alternating with two or more applications of a fungicide that is not in Group 11 will help reduce the potential for resistance development. If more than 12 applications are made, observe the following guidelines:

- When a QoI fungicide is used as a solo product, make no more than 1/3 (33%) of the total number of fungicide applications per season with the QoI containing product.
- For programs including tank mixes or premixes of QoI fungicide with mixing partners of a different mode of action, the number of QoI containing applications must represent no more than 1/2 (50%) of the total number of fungicide applications per season.
- In programs including applications of QoI fungicides as both solo products and mixtures, the number of QoI containing applications must represent no more than 1/2 (50%) of the total number of fungicide applications per season.

If a Group 11 fungicide is applied to the seed or soil, do not make another application with a Group 11 fungicide for at least 3 weeks.

SOIL BORNE/SEEDLING DISEASE CONTROL

For crops that have specific use directions for soil borne disease control:

This product can provide control of many soil borne diseases if applied early in the growing season. Specific applications for soil borne diseases include in-furrow applications and banded applications applied over the row, either shortly after plant emergence or during herbicide applications or cultivation. These applications will provide control of pre- or postemergence damping off and diseases that infect plants at the soil-plant interface.

The use of either type of application depends on the regional cultural practices. In some locations, one type of application may provide better disease control than the other, depending on the timing of the disease epidemic. Seedling diseases are generally controlled by in-furrow applications while banded applications are more effective against soil borne diseases that develop later in the season. Consult your local expert to get some guidance regarding application type.

Under cool, wet conditions, crop injury from soil directed applications can occur.

For banded applications, apply prior to infection as a directed spray to the soil, using single or multiple nozzles, adjusted to provide thorough coverage of the lower stems and the soil surface surrounding the plants. Band width should be limited to 7 inches or less. Apply at a rate of 0.2-0.4 oz product (0.1-0.2 oz AI)/100 row feet (for banded applications on 22-inch rows the maximum application rate is 0.35 oz/1000 row feet). These applications come into contact with the foliage and are counted as foliar applications when considering resistance management. They may be applied during cultivation or hilling operations to provide soil incorporation.

For in-furrow applications, apply as an in-furrow spray in 3-15 gallons of water at planting. Mount the spray nozzle so the spray is directed into the furrow just before the seed disease development, if there is a history of Pythium problems, or if minimum/low till.

IN-FURROW APPLICATION RATES

Rate Per 1000 Row Feet		PRODUCT PER ACRE (oz.)						
oz. product	oz. AI	22" rows	30" rows	32" rows	34" rows	36" rows	38" rows	40" rows
0.2	0.1	4.75	3.5	3.3	3.1	2.9	2.8	2.6
0.3	0.15	7.1	5.2	4.9	4.6	4.4	4.1	3.9

Drip

Refer to the **Instructions for Use through Irrigation Systems (Chemigation) section.**

PRODUCT USE INSTRUCTIONS

Application: Thorough coverage is necessary to provide good disease control. Make no more spray solution than is needed for application. Avoid spray overlap, as crop injury may occur.

Adjuvants: The use of an adjuvant may improve consistency and performance of this product. Refer to crop specific directions for use for information regarding the use of adjuvants.

Page: 5

Author: emalone Subject: Highlight Date: 3/4/2014 12:14:23 PM

Delete

Efficacy: Under certain conditions conducive to extended infection periods, use another registered fungicide for additional applications once the maximum amount of this product has been used. If resistant isolates to Group 11 fungicides are present, product performance may be reduced for certain diseases. When heavy infection pressure exists, when treating varieties highly susceptible to disease, or when environmental conditions are conducive to disease development, best results are obtained when using the higher rates and/or the shorter spray intervals allowed in the crop specific use directions on this label..

MIXING AND APPLICATION INSTRUCTIONS

Spray Equipment

All types of spray equipment commonly used for ground and aerial applications may be used with this product. Proper adjustment and calibration of spraying equipment to give good canopy penetration and coverage is essential for good disease control.

Nozzles

- Equip sprayers with nozzles that provide accurate and uniform application.
- Use nozzles that are the same size and uniformly spaced across the boom.
- Calibrate sprayer before use.
- Use screens to protect the pump and to prevent nozzles from clogging.
- Use screens 16-mesh or coarser on the suction side of the pump.
- Do not place a screen in the recirculation line.
- Use 50-mesh or coarser screens between the pump and boom, and where required, at the nozzles.
- Check nozzle manufacturer's use guidelines.

Pump

- Use a pump with capacity to:
  a) Maintain 35 to 40 psi at nozzles.
  b) Provide sufficient agitation in tank to keep mixture in suspension. This requires recirculation of 10% of tank volume per minute.
- Use a jet agitator or liquid sparge tube for agitation.
- Do not air sparge.

For more information on spray equipment and calibration, consult sprayer manufacturers and state agricultural agency for advice. For specific local directions and spray schedules, consult your state agricultural agency for advice.

Spray Solution Preparation

- Proper mixing of this product with water requires use of a spray tank equipped with agitation.
- Prepare only the amount of spray solution required for immediate use. Do not allow spray mixture to stand overnight or for prolonged periods.
- Thoroughly clean spray equipment before preparing the spray solution.
- Maintain constant agitation throughout the spraying operation.
- Rinse spray tank thoroughly with clean water after each day's use and dispose of pesticide rinsate by application to an already treated area

Stand-alone product solution:

- Add ½ to ⅔ of the required amount of water to a spray or mixing tank and begin agitation.
- Add the specified amount of this product to the tank.
- Continue agitation while adding the remainder of the water and allow time for good dispersion.
- Begin application of the spray solution after the product has completely dispersed in the mix water and maintain agitation during spraying.

Tank mixture with other products:

- Add ½ to ⅔ of the required amount of water to a spray or mixing tank and begin agitation.
- Add tank mix partners to the tank in the following order: 1) wettable powder and water dispersible granule (WDG) formulations, 2) liquid flowables (aqueous suspensions), and 3) emulsifiable concentrates.
- Allow the material to completely dissolve and disperse into the mix water.
- Continue agitation while adding the remainder of the water and this product to the tank mix and allow time for good dispersion
- Begin application of the spray mixture while maintaining agitation.

This page contains no comments

Compatibility
This product is compatible with many pesticides and additives commonly used in tank mixtures. To determine the physical compatibility of this product with other products prior to full scale use, conduct a jar test as follows: Using a quart jar, add the proportionate amounts of the tank mixture components to 1 qt. of water. Add wettable powders and water dispersible granule (WDG) products first, then liquid flowables, and emulsifiable concentrates last. Mix thoroughly and let stand for at least 5 minutes. If the combination remains mixed or can be remixed readily, it is physically compatible. Once compatibility has been confirmed, use the same procedure for adding required ingredients to the spray tank.

NOTE: Some phytotoxicity may be observed when applying tank mixtures of this product with emulsifiable concentrate (EC) formulations. These effects may be enhanced if applications are made under cool, cloudy conditions and these conditions remain for several days following application. In addition, adjuvants that contain some forms of silicone may also contribute to phytotoxicity.

INSTRUCTIONS FOR USE THROUGH IRRIGATION SYSTEMS (CHEMIGATION)

- Use only on crops for which chemigation is specified on this label.
- Apply this product through 1) sprinkler irrigation systems including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move; 2) drip irrigation systems. Do not apply this product through any other type of irrigation system.
- Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water
- Apply in 0.1-0.25 inches of water per acre. Excessive water may reduce efficacy
- If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers, or other experts.
- Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.
- A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

Spray Preparation: Clean chemical tank and injector system thoroughly. Flush system with clean water.

Drip Irrigation: This product may be applied through drip irrigation systems for soil-borne disease control. The soil should have adequate moisture capacity prior to drip application.

Terminate drip irrigation at fungicide depletion from the main feed supply tank or after 6 hours from start, whichever is shorter. For maximum efficacy, delay subsequent irrigation (water only) for at least 24 hours following drip application.

Sprinkler Irrigation
Apply this product through sprinkler irrigation systems including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move. Apply with center pivot or continuous-move equipment distributing 1/2 acre-inch or less during treatment. In general, use the least amount of water required for proper distribution and coverage. If stationary systems (solid set, handlines or wheel lines other than continuous-move) are used, inject this product into no more than the last 20-30 minutes of the set.

Do not apply when winds are greater than 10-15 mph to avoid drift or wind skips. Do not apply when wind speed favors drift beyond the area intended for treatment.

Plant injury, lack of effectiveness, or illegal pesticide residues in the crop may result from non-uniformly treated water. Thorough coverage of foliage is required for good control. Good agitation should be maintained during the entire application period.

If you have questions about calibration, contact your State Extension Service specialist, equipment manufacturer or other experts.

Operating Instructions:

1. Do not apply when wind speed favors drift beyond the area intended for treatment.
2. The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water-source contamination from backflow.
3. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
4. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to

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prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

5. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
6. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
7. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
8. Allow sufficient time for pesticide to be flushed through all lines and all nozzles before turning off irrigation water. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.
9. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

Center Pivot Irrigation Equipment

Notes: (1) Use only with drive systems which provide uniform water distribution. (2) Do not use end guns when applying this product through center pivot systems as it may result in non-uniform application.

- Determine the size of the area to be treated.
- Determine the time required to apply 1/8 to 1/2 inch of water over the area to be treated when the system and injection equipment are operated at normal pressures as specified by the equipment manufacturer. When applying this product through irrigation equipment use the lowest obtainable water volume while maintaining uniform distribution. Run the system at 80-95% of the manufacturer's rated capacity.
- Using water, determine the injection pump output when operated at normal line pressure.
- Determine the amount of product required to treat the area covered by the irrigation system.
- Add the required amount of product and sufficient water to meet the injection time requirements to the solution tank.
- Make sure the system is fully charged with water before starting injection of the spray solution. Time the injection to last at least as long as it takes to bring the system to full pressure.
- Maintain constant agitation of the spray solution during the injection period.
- Continue to operate the system until the spray solution has cleared the sprinkler head.

Solid Set, Hand Move, and Moving Wheel Irrigation Equipment

- Determine the acreage covered by the sprinklers.
- Fill injector solution tank with water and adjust flow rate to use the contents over a 20 to 30-minute interval. When applying this product through irrigation equipment, use the lowest obtainable water volume while maintaining uniform distribution.
- Determine the amount of product required to treat the area covered by the irrigation system.
- Add the required amount of product into the same quantity of water used to calibrate the injection period.
- Operate the system at the same pressure and time interval established during the calibration.
- Stop injection equipment after treatment is completed. Continue to operate the system until the spray solution has cleared the last sprinkler head.

Specific Instructions for Public Water Systems

1. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
2. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, back-flow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, discharge the water from the public water system into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
3. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
4. The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent

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fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

5. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. Do not apply when wind speed favors drift beyond the area intended for treatment.

SPECIFIC USE DIRECTIONS

TURF:
UPGRADE may be used for control of certain pathogens causing foliar, stem, and root diseases, including leaf and stem blights, leaf spots, patch diseases, mildews, anthracnose, fairy rings, molds, and rusts of turfgrass plants. UPGRADE may be used to control certain diseases on turf in golf courses, lawns and landscape areas around residential, institutional, public, commercial and industrial buildings, parks, recreational areas and athletic fields.

Integrated Pest (Disease) Management (IPM): Sound turf management resulting healthy, vigorous turf is the foundation of a good IPM program. Cultural practices such as proper choice of turf variety, nutrient-management, proper cutting height, thatch management, and proper watering, drainage, and moisture stress management should be integrated with the use of fungicides to increase turf vigor and reduce the susceptibility to disease, immunoassay detection kits and extension service diagnostic services can assist in the early and accurate identification of causal organisms and corresponding selection of the proper fungicide when required.

Resistance Management: Some turf disease pathogens are known to have developed resistance to products used repeatedly for their control. UPGRADE should be applied at full use rates in a tank mix or alternation program with other registered fungicides that have a different mode of action and to which pathogen resistance has not developed. Since UPGRADE is a strobilurin fungicide, avoid alternation with other strobilurins, such as kresoxim-methyl and trifloxystrobin. Do not apply more than two [2] sequential UPGRADE applications for Gray Leaf Spot and *Pythium spp.* control. For all other diseases when Gray Leaf Spot and *Pythium spp.* are not present, do not apply more than three sequential applications of UPGRADE.

DIRECTIONS FOR APPLICATION FOR TURF DISEASES

Application Directions: UPGRADE should be applied prior to disease development. Mix UPGRADE with the required amount of water and apply as a dilute spray application in 1 to 3 gals. of water per 1000 sq. ft. (44-132 gals./A). Repeat applications at specified intervals for as long as required. For spot treatments, use **0.38** fl. oz. UPGRADE per 1 to 3 gals. of water. Do not apply more than **2.4** gals. product/acre/year (**7.1** fl. oz. product/1000 sq. ft./year). Applications may be made by ground only.

Do not exceed 2.4 gallons product/crop acre/year or 8 applications/crop/year.
Do not exceed 600 gallons spray volume per acre for foliar applications.
Do not exceed 2 pints volume per square foot for drench and crown applications.

Dollar Spot: UPGRADE does not control dollar spot. During periods of dollar spot pressure, always mix UPGRADE with **Legend®**, **Spectro™**, **26/36®** or another dollar spot control fungicide. UPGRADE is compatible in tank mixes with many other fungicides that control dollar spot.

Target Diseases	Use Rate (fl. oz. product per 1000 sq. ft.)	Application Interval (days)	Remarks*
Anthracnose *(Colletotrichum graminicola)*	0.38-0.77	14-28	Use preventatively. Begin applications when conditions are favorable for disease infection, prior to disease symptom development.

sprench - mini drench

1/4 - 1/8 of a full application

- designed to wet top inch to targeted roots in top inch of soil."

more popular w/ insecticides

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Author: emalone Subject: Highlight Date: 3/4/2014 12:15:29 PM

Author: emalone Subject: Sticky Note Date: 3/5/2014 10:07:29 AM
You moved up to here based off of my comment, but I meant higher in the use directions for ornamentals. Please move these back to the ornamentals section.

more to top of page 12.

Brown Patch *(Rhizoctonia solani*	0.38-0.77	14-28	Apply when conditions are favorable for disease development.
Cool Weather Brown Patch Yellow Patch *(Rhizoctonia cerealis)*	0.77	28	Make one or two applications in fall or when conditions are favorable for disease development.
Fairy Ring *(Lycoperdon spp., Agrocybe pediades, and Bovistra plumbea)*	0.77	28	For prevention in Cool season turf, initiate applications in the spring when root zone soil temperatures reach 55-60° F. Make a second application using a 28day interval. Immediately after fungicide is applied, irrigate the area with sufficient water to move the active ingredient down into the crown and active root zone of the turf. The amount of water is dependent on the depth of the root zone. Do not use a wetting agent unless hydrophobic soil conditions exist. Fairy ring symptoms may take 2 to 3 weeks to disappear following application. Alternate with another fungicide with a different mode of action, such as Affirm®, Torque® or Prostar®. For hydrophobic areas, Use an appropriate wetting agent to effectively penetrate the hydrophobic zone commonly created with this disease.
Fusarium Patch *(Microdochium nivale)*	0.38-0.77	14-28	Use preventatively. Begin applications when conditions are favorable for disease infection, prior to disease symptom development.
Gray Leaf Spot *(Pyricularia grisea)*	0.38-0.77	14-28	Begin applications before disease is present and continue applications while conditions are favorable for disease development.
Leaf Rust Stem Rust Stripe Rust *(Puccinia spp.)*	0.38-0.77	14-28	Begin applications when conditions are favorable for disease infection, prior to disease symptom development.
Leaf Spot *(Bipolaris sorokiniana)*	0.38-0.77	14-21	Apply when conditions are favorable for disease development.
Melting Out *(Drechslera poae)*	0.38-0.77	14-21	Apply when conditions are favorable for disease development
Necrotic Ring Spot *(Leptosphaeria korrae)*	0.77	14-28	Apply when conditions are favorable for disease development.
Pink Patch *(Limonomyses roseipellis)*	0.38-0.77	14-28	Apply when conditions are favorable for disease development.
Powdery Mildew *(Erysiphe graminis)*	0.38-0.77 1-2 pints/acre	14-28	Begin applications when conditions are favorable for disease infections prior to disease symptom development.
Pythium Blight Pythium Root Rot *(Pythium aphanidermatum, Pythium spp.)*	0.77	10-14	Use preventatively. Begin applications when conditions are favorable for disease infection, prior to disease symptom development. During periods of prolonged favorable conditions, treat on the 10 day application interval. For use on newly seeded as well as established turf.
Red Thread *(Laetisaria fuciformis)*	0.38-0.77	14-28	Apply when conditions are favorable for disease development.
Rhizoctonia Large Patch *(Rhizoctonia solani))*	0.77	14-28	Make one or two applications in fall or when conditions are favorable for disease development.
Southern Blight *(Sclerotium rolfsii)*	0.38-0.77	14-28	Apply when conditions are favorable for disease development.

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Author: emalone Subject: Highlight Date: 3/5/2014 9:37:55 AM

Author: emalone Subject: Sticky Note Date: 3/5/2014 9:42:54 AM
You deleted all of the pints/A but this one. Either delete if it was just missed. If you would like to keep it then please place it in parantheses and double check that your conversion is correct.

Author: emalone Subject: Highlight Date: 3/4/2014 12:16:36 PM

Author: emalone Subject: Sticky Note Date: 3/5/2014 9:44:23 AM
Delete extra parentheses and I do believe this should be "solani"

Author: emalone Subject: Sticky Note Date: 3/5/2014 9:44:37 AM
Delete empty row

Spring Dead Spot *(Leptosphaeria korrae)* or *(Gaeumannomyces graminis var. graminis)* or *(Ophiosphaerella herpotricha)*	0.77	14-28	Apply applications approximately when soil temps in the root zone reach 80F or approximately two months prior to bermudagrass dormancy. Water application into root zone. 1/4" to 1/2" of irrigation directly after application is recommended. Reapply 14 to 28 days later. Tank mixing with other SDS products such as Torque may enhance control under severe disease pressure.
Snow Molds Gray Snow Mold, Typhula Blight *(Typhula incarnata)* Pink Snow Mold *(Microdochium nivale)*	0.77 - 1.35	single application	Make a single application of 0.77 - 1.35 fl. oz. in late fall just before snow cover. Tank mixing with other snow mold fungicides, such as Torque, 26/36, Legend, or Spectro may enhance control under severe disease pressure.
Summer Patch *(Magnaporthe poae)*	0.38-0.77	14-28	Apply when conditions are favorable for disease development.
Take-all Patch *(Gaeumannomyces graminis var. avenae)*	0.77	28	Begin applications when conditions are favorable for disease infection, prior to disease symptom development. Make two applications, 28 days apart in the spring and two applications 28 days apart in the fall.
Zoysia Patch *(Rhizoctonia solani and/or Gaeumannomyces incrustans)*	0.38-0.77	14-28	Apply 1 or 2 applications approximately one month prior to zoysiagrass dormancy. Reapply 14 to 28 days later.

*Do not apply more than two sequential applications of UPGRADE for control of Gray Leaf Spot and *Pythium* spp. For all other diseases when Gray Leaf Spot and *Pythium* spp. are not present, do not apply more than three sequential applications of UPGRADE.

UPGRADE Rate Conversion Chart for Turf

Fl. Oz. Product Per 1000 Sq. Ft.	Fl. Oz. Product per Acre	Pints Product Per Acre
0.38	16.6	1.03
0.58	25.3	1.58
0.77	33.5	2.10
0.96	41.8	2.61
1.15	50.1	3.13
1.35	58.8	3.67

Small Volume Application - Amount of UPGRADE to Mix per Gallon for Turf Applications

UPGRADE Use Rate fl. oz./1000 sq. ft.	Amount UPGRADE per volume [milliliters]		
	1 gallons	3 gallons	5 gallons
0.38	11.2	33.6	56.0
0.58	17.2	51.6	86.0
0.77	22.8	68.4	114.0
0.96	28.4	85.2	142.0
1.15	34.0	102.0	170.0
1.35	39.9	119.7	199.5

disregard

ORNAMENTALS

UPGRADE is recommended for control of certain pathogens causing foliar, aerial, and root diseases, including leaf, tip, and flower blights, leaf spots, downy mildew, powdery mildew, anthracnose, and rusts of ornamental plants. UPGRADE may be used to control listed diseases of herbaceous, deciduous and evergreen ornamentals and listed vegetable seedlings and transplants grown in greenhouses, lath houses, hoop houses, high tunnel and shadehouses, and herbaceous, deciduous and evergreen

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Author: emalone Subject: Highlight Date: 3/5/2014 9:47:15 AM

Author: emalone Subject: Sticky Note Date: 3/5/2014 9:47:28 AM
Change to "or"

Author: emalone Subject: Highlight Date: 3/5/2014 9:48:33 AM

Author: emalone Subject: Sticky Note Date: 3/5/2014 9:48:42 AM
"zoysiagrass"

Author: emalone Subject: Highlight Date: 3/5/2014 9:09:30 AM

Author: emalone Subject: Sticky Note Date: 3/5/2014 9:10:27 AM
"DIRECTIONS FOR APPLICATIONS FOR ORNAMENTAL DISEASES" same formatting as turf header above. Do the same for the Food Crops section below.

Author: emalone Subject: Highlight Date: 3/5/2014 10:02:36 AM

Author: emalone Subject: Sticky Note Date: 3/5/2014 10:03:25 AM
Delete. I do not see any listed vegetable seedlings in the ornamental section

Do not use this product

ornamentals grown in field, container, nurseries, retail nurseries, and other residential and commercial landscape areas.

Integrated Pest (Disease) Management:
UPGRADE should be integrated into an overall disease management strategy that includes selection of varieties with disease tolerance, optimum plant populations, proper fertilization, winter and/or spring pruning, plant residue management and proper timing and placement of irrigation.

Resistance Management: Some ornamental disease pathogens are known to have developed resistance to fungicides used repeatedly for their control. UPGRADE should be applied in an alternation or tank mix program with other registered fungicides that have a different mode of action and to which pathogen resistance has not developed. Do not make more than two (2) sequential applications of UPGRADE before alternating with a fungicide of a different mode of action. Do not alternate UPGRADE with other FRAC 11 or strobilurin fungicides.

Application Directions: Apply UPGRADE as a broadcast or banded spray targeted at the foliage or crown of the plant. Apply to runoff in sufficient water to ensure complete coverage of the target plant. Good coverage and wetting of foliage is necessary for best control. Refer to the label for specific use directions for control of certain diseases. Repeat applications at specified intervals (plus alternations for resistance management) for as long as required. Applications may be made by ground only.

UPGRADE applications should begin prior to disease development and continue throughout the season at specified intervals following resistance management guidelines. UPGRADE works best when used as part of a preventative disease management program.

Use only surfactants approved for ornamental plants in combination with UPGRADE. Do not use silicone based products with Heritage Fungicide due to possible phytotoxicity. Always test tank mixes on a small group of representative plants prior to broad scale use.

Apply UPGRADE at use rates of 1.9-7.7 fluid ounces/100 gallons every 7-28 days (or as otherwise specified for a specific plant or disease). The addition of a non-silicone based wetter-sticker at the recommended use rate may enhance coverage on hard-to-wet plant foliage.

Under most conditions and for most diseases, apply 3.9-7.7 fluid ounces/ 100 gallons on a 7-14 day interval.

Under light to moderate disease pressure, use the lower rates (1.9-3.9 fl oz/100 gallons) on a 7-14 day interval or the higher rates (5.8-7.7 fl oz/100 gallons) on a longer 14-28 day interval.

Under environmental conditions which promote severe disease development, use the higher rates (5.8-7.7 fl oz/100 gallons) on a 7-14 day interval. Use of UPGRADE as a "rescue" (late curative or eradicant) treatment may not always result in satisfactory disease control.

In addition, do not tank mix UPGRADE with other fungicides, insecticides, herbicides, fertilizers, adjuvants, etc, unless local experience indicates that the tank mix is safe to ornamental plants.

Drench Application: UPGRADE may be applied to control soilborne, seedling, and crown diseases of production ornamentals (greenhouse, hoop house, lath house, shadehouse, and field or container grown) as a preventative, drench treatment prior to infection. Good coverage of the pre-infection area (root zone, root ball, crown, etc.) is necessary for satisfactory control. UPGRADE may be drench applied to container grown ornamentals using 0.39-1.7 fluid ounces/100 gallons of water. Apply 1-2 pints of the solution per square foot surface area on a 7-28 day interval. Apply drench prior to infection as healthy roots are necessary to optimize product uptake, systemic translocation and disease protection. For resistance management do not make more than three sequential drench applications of UPGRADE before alternating with a fungicide of a different mode of action. Caution should be taken before making application of UPGRADE as a drench to small bedding plants in the seedling/plug stage due to possible phytotoxicity. A limited quantity of plants should be tested prior to full-scale application.

Drip Irrigation: UPGRADE may be applied through drip irrigation systems to potted ornamentals or to bedded, field grown ornamentals for soil-borne disease control. Apply 3.9-30.8 fluid ounces UPGRADE per acre as a preventative disease application. The soil or potting media should have adequate moisture capacity prior to drip application. Terminate drip irrigation at fungicide depletion from the main feed supply

adcl

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tank or after 6 hours from start, whichever is shorter. For maximum efficacy, subsequent irrigation (water only) should be delayed for at least for 24 hours following drip application.

Ornamental Use Precautions
Do not apply UPGRADE to apple or cherry trees (Flowering, Yoshina variety) due to possible phytotoxicity. Furthermore, do not use spray equipment that has applied UPGRADE for use in these sensitive crops due to possible phytotoxicity from residue remaining in the sprayer. UPGRADE may be applied to certain varieties of crabapple for control of apple scab. UPGRADE has been shown to be safer when applied to the species and varieties listed in Table 4. However, due to the large number of genera, species, and varieties of crabapple, it is impossible to test every one for tolerance to UPGRADE. The professional user should conduct small scale testing to insure plant safety prior to broadscale commercial use on plant genera and species not listed on this label.

TABLE 1: Diseases Controlled: When used in accordance with the label directions, UPGRADE will provide control of the following diseases of ornamental plants:

Disease [Pathogen]	Use Rates and Specific Instructions (fluid ounces product per 100 gallons)
[1] CONIFER BLIGHTS Phomopsis Blight (Phomopsis juniperovora) Tip Blight (Sirococcus strobilinus)	1.9 – 7.7 fl oz every 7-28 days
[2] LEAF BLIGHTS/LEAF SPOTS Alternaria Leaf Spot (Alternaria spp.) Anthracnose (Colletotrichum spp., Elsinoe spp.)	1.9 – 7.7 fl oz every 7-28 days
Downy Mildew of Rose (Peronospora sparsa)	3.9 – 7.7 fl oz every 7-21 days during periods of active plant growth and prior to dormancy or severe infection.
Entomosporium Leaf Spot (Entomosporium mespili)	1.9 – 7.7 fl oz every 7-28 days
Iris Leaf Spot (Mycosphaerella macrospora)	3.9 – 7.7 fl oz every 7-28 days
Leaf spot (Cladosporium echinulatum)	1.9 – 7.7 fl oz every 7-28 days
Rose Blackspot (Diplocarpon rosea)	7.7-15.4 fl oz every 7-14 days. Under severe disease conditions or if disease is already present, UPGRADE may be tank mixed with other fungicides such as Protect, Legend, or 3336 for enhanced disease management. Do not exceed 46 fl oz/acre/application.
Myrothecium leaf spot (Myrothecium spp.)	3.9-7.7 fl oz every 7-21 days
Downy Mildew of bedding plants (Peronospora spp.)	1.9-7.7 fl oz every 7-28 days
Scab (Venturia inaequalis)	**For crabapples only, see Table 4 for tolerant species. Do not apply to apple trees.** 1.9 – 7.7 fl oz every 10-28 days.
Marrsonina Leaf Spot (Marsonina spp.)	1.9 – 7.7 fl oz 14-28 days.
Cercospora Leaf Spot (Cercospora sp.)	1.9 – 7.7 fl oz 7-28 days.
[3] POWDERY MILDEW Erysiphe pannosa, Erysiphe spp. Microsphaera azaleae Sphaerotheca pannosa	Preventative applications only. Do not make more than 2 sequential applications before rotating to another class of fungicide. 1.9 – 7.7 fl oz every 7-28 days
[4] RUSTS Needle Rust (Melampsora occidentalis) Phragmidium spp. Pucciniaspp. Gymnosporagium spp.	1.9 – 7.7 fl oz every 7-28 days. Alternation with a DMI Class fungicide such as Torque can enhance disease management.

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[5] FLOWER BLIGHTS Anthracnose (Collectotrichum spp., Elsinoe spp.)	 1.9 – 7.7 fl oz every 7-28 days
Botrytis Blight (Botrytis cinerea)	For suppression only. 7.7-15.4 fl oz every 7-21 days. Do not exceed 46 fl oz/acre. Rotation or tank mixing with other fungicides such as Protect, Legend, Spectro, Affirm, or 3336 will enhance disease management.
[6] SHOOT/STEM DISEASES Aerial/Shoot Blight (Phytophthora spp.)	1.9-3.9 fl oz every 7-28 days
[7] SOILBORNE DISEASES [Directed Spray] Rhizoctonia solani Sclerotium rolfsii Fusarium spp.	Apply as a directed spray to the soil surface and lower stem and crown area of the plant. 1.9 – 7.7 fl oz every 7-21 days.
[8] SOILBORNE DISEASES [Drench] Rhizoctonia solani Sclerotium rolfsii Fusarium spp.	0.39-1.7 fl oz [11-51 mL] Apply 1-2 pints of the solution per square foot surface area, every 7-28 days. See Ornamentals Section for additional drench directions.

PLANT SAFETY: NUP-8099 has been shown to be safe when applied to the ornamental plants listed in Tables 2 and 3. However, due to the large number of genera, species and varieties of ornamental and nursery plants, it is impossible to test every one for tolerance to UPGRADE. Neither the manufacturer nor the seller has determined whether or not UPGRADE can be used safely on genera, species, or varieties of ornamental and nursery plants not specified on this label. The professional user should conduct small scale testing to insure plant safety prior to broad scale commercial use on plant genera and species not listed in this label. In addition, do not tank mix UPGRADE with other fungicides, insecticides, herbicides, fertilizer, adjuvants, etc, unless local experience indicates that the tank mix is safe to ornamental plants.

Do not apply UPGRADE to certain apple, crabapple, or cherry trees due to possible phytotoxicity. Furthermore, do not use spray equipment that has applied UPGRADE for use in these sensitive crops due to possible phytotoxicity from residue remaining in the sprayer.

Tolerant Ornamental Plants: UPGRADE has been found to be safe when applied to the plants listed in Tables 2 and 3 when applied according to recommended application methods, rates, and timings.

TABLE 2; Tolerant Plants Listed by Botanical Name

BOTANICAL NAME	COMMON NAME	DISEASES
Abelia spp.	Abelia	2
Abies fraseri	Fraser fir	1,4
Abies procera	Noble Fir	1,4
Acer palmatum	Japanese maple	2
Acer saccharum	Sugar maple	2
Ageratum spp.	Floss-Flower	3,4
Ageratum spp.	Pussy's-Foot	3,4
Aglaonema spp.	Chinese evergreen	2,4
Ajuga reptans	Bugle, Bugleweed	3
Antirrhinum spp.	Snap-Dragon	2[DM],3,4
Aphelandra spp.	Zebra-Plant	2
Artemisia spp.	Mugwort, Sagebrush	2
Artemisia spp.	Wormwood	2
Aster spp.	Aster, Starwort	4
Aucuba japonica	Japanese aucuba, Japanese laurel	7
Begonia spp. (except Rieger begonia)	Begonia	2,3
Berberis thunbergii	Barberry	3,4

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Author: emalone Subject: Sticky Note Date: 3/5/2014 10:11:12 AM
"UPGRADE"

1 Author: emalone Subject: Highlight Date: 3/5/2014 10:11:05 AM

Betula nigra	River birch	3,4
Bougainvillea spp.	Bougainvillea	2
Brassaia actinophylla	Rubber-tree, Umbrella-tree	2,7
Buddleia davidii	Buddleia, Butterfly-bush	2
Buxus sempervirens	Boxwood	2,7 (Rhizoctonia)
Caladium spp.	Caladium	7
Camellia japonica	Camellia	2
Caryota urens	Sago Palm	2,7
Catharanthus roseus	Vinca	2
Ceanothus sanguineus	Wild lilac	3
Ceanothus spp.	Ceanothus, California lilac, Snowball	3
Cedrus atlantica	Atlas cedar	2,4
Cedrus spp.	White cedar	2,4
Cercis occidentalis	Western redbud	2
Chamaecyparis spp.	Cypress, Leyland cypress	1
Chamaecyparis pisifera	Sawara cypress	1
Chamaedora elegans	Parlor palm	7
Chrysanthemum spp.	Chrysanthemums	2, 7 (Fusarium)
Clethra alnifolia	Clethra, White alder	2
Cornus spp.	Dogwood, Pink dogwood, Flowering dogwood	2(Anthracnose),3
Cornus florida	Dogwood	2 (Anthracnose),3
Cortaderia selloana	Pampas grass	3
Cotoneaster adpressus	Creeping Cotoneaster	7
Cotoneaster horizontalis	Cotoneaster – variegated rockspray	7
Cyclamen spp.	Cyclamen	7 (Fusarium)
Cyperus spp.	Cyperus	1
Delphinium spp.	Larkspur	2
Dianthus caryophyllus	Carnation	3,4
Dianthus spp.	Pink	3,4
Dieffenbachia spp.	Oumb-Cane	2
Dietes iridiodes	African iris, Butterfly iris	4 (Puccinia)
Digitalis spp.	Foxglove	2,3
Epipremnum spp.	Pothos	2
Erica dareyensis	Heather	2
Euonymus alata	Dwarf winged euonymus	2
Euonymus alatus	Burning bush	2
Euonymus 15ndromeda	Evergreen euonymus	2
Euphorbia spp.	Poinsettia	2 (Alternaria)
Fatsia japonica	Japanese fatsia, Paper-plant	2
Ficus spp.	Fig	2
Forsythia viridissima	Forsythia	2
Gaillardia spp.	Blanket-Flower	2
Gardenia jasminoides	Gardenia	3
Geranium spp.	Cranesbill	5 (Botrytis)
Gerbera jamesonii	Gerber daisy, Transvaal daisy	3
Hedera algeriensis	Algerian ivy	2
Hedera helix	English ivy	2
Hibiscus moscheutos	Hibiscus	2,3
Hibiscus rosa-sinensis	Hibiscus	2,3
Hibiscus syriacus	Rose of Sharon	2,3
Hosta spp.	Hosta	2
Hydrangea macrophylla	French hydrangea	2,3
Hydrangea spp.	Hydrangea	2,3
Ilex spp.	Holly, Winterberry, Yaupon	3
Impatiens spp.[1]	Balsam, Impatiens[1]	2 (Alternaria), 7 (Rhizoctonia
Iris xiphium	Iris (bulbous, Spanish, Dutch)	2 (Iris Leaf Spot)
Itea virginica	Virginia willow	3,4

This page contains no comments

Juniperus procumbens	Juniper	1 [Phomopsis], 4
Juniperus scopulorum	Juniper	1 [Phomopsis], 4
Juniperus spp.	Juniper	1 [Phomopsis],4
Juniperus virginiana	Red cedar	1 [Phomopsis],4
Lagerstroemia indica	Crapemyrtle	2,3
Laurus nobilis	Laurel	3
Lilium spp.	Asiatic Lily	2
Liriope muscari	Lily-turf	2
Lobularia maritime	Sweet alyssum	7
Magnolia grand/flora	Southern magnolia	2
Magnolia soulangiana	Saucer magnolia	2
Magnolia spp.	Magnolia	2
Malus spp.	Crabapple (See Table 4 for variety list)	2 [Scab]
Nandina domestica	Nandina	2
Nerium oleander	Oleander, Rose-bay	2
Pelargonium spp.	Geranium	3, 4, 5 [Botrytis]
Pennisetum alopecuroides	Grass	2
Peperomia spp.	Baby rubber-plant	2,7
Petunia spp.	Petunia	6
Phalaris spp.	Dwarf pampas grass	3
Philodendron spp.	Philodendron	2
Phlox spp.	Phlox	3
Phoenix dactylifera	Date palm	2,7
Phoenix roebelenii	Roebelin's palm	2,7
Photinia glabra	Red-tip photinia	2,3,4
Picea abies	Norway spruce	1
Picea glauca	White spruce	1
Picea pungens	Blue spruce	1
Pieris japonica	Japanese Andromeda	2,7
Pinus muhgo	Muhgo pine	1 (Tip Blight), 4
Pinus nigra	Black pine	1 [Tip Blight, 4
Pinus silvestris	Scotch pine	1,4
Pinus spp.	Pine	1 [Tip Blight],4
Pinus 16ndrome	Eastern white pine	1 [Tip Blight],4
Pittosporum spp.	Australian laurel	3,4
Pittosporum tobira	Mock-orange	3,4
Plectranthus spp.	Swedish ivy, Coleus	2
Populus trichocarpa	Poplar	4
Populus spp.	Aspen Trees	2
Potentilla spp.	Cinquefoil	2
Primula spp.	Primrose	2
Prunus pumila	Cherry	2,5
Prunus spp.	Flowering plum, Purple-leaf plum	2,5
Pseudotsuga spp.	Douglas fir	1 4
Pyrus calleryana	Bradford's pear	3
Quercus 16ndrome	Red oak	2,3
Quercus palustris	Pin oak	2,3
Rhaphiolepsis indica	Indian hawthorn	2,3,4
Rhododendron spp.	Azaleas, Rhododendron	2[Anthracnose],3,6,7
Rhododendron spp.	Glacier Azalea	2[Anthracnose],3,6,7
Rosa spp.	Rose	2 [Alternaria, Downy Mildew, 3 [Sphaerotheca], 4 [Phragmidium]
Rosmarinus spp.	Rosemary (prostrate)	2
Rudbeckia hirta	Black-eyed-susan	2
Salvia spp.	Sage	3,4
Schlumbergera	Holiday cactus	2,7
Sedum spp.	Orpine, Stonecrop	2

This page contains no comments

Sempervivum spp.	Live-forever, House-Leek	2
Setaria spp.	Ribbon-grass	2,3
Spathiphyllum floribundium	Peace lily	2,7
Spirea budalda	Spirea	3
Spirea japonica	Spirea	3
Syagrus romanzoffianum	Queen palm	2
Tagetes spp.	Marigold	2 [Alternaria]
Taxus baccata	Spreading yew	7
Thuja plicata	Western Red Cedar	4
Thujopsis spp.	Arborvitae	2
Thymus serphyllum	Creeping thyme	2
Tsuga heterophylla	Western Hemlock	4
Tsuga spp.	Hemlock	4
Verbena spp.	Verbena, Vervain	3
Viburnum spp.	Viburnum	2,3,4
Vinca spp.	Periwinkle	2,6
Viola spp. [1]	Viola, Pansy [1]	2
Wiegela florida	Pink wiegela	2
Yucca spp.	Yucca	7
Zinnia spp.	Zinni	2 [Alternaria],3

Footnotes: [1] Do not exceed 3.9 fl oz/100 gallons on indicated species

TABLE 3: Tolerant Varieties of Crabapple and Other Malus Species

Arkansas Black	Eleyi	Mary Potter	*M. seiboldii*
M.atrosanguinea	Enterprise	Molten Lava	Selkirk
M. baccata	Evereste	New Centennial	Sentinel
M. baccata var. jackii	Eyelynn	Ormiston Roy	Silver Moon
M. baccata var. mandshurica	*M. floribunda*	Pink Satin	Silverdrift
Callaway	Gloriosa	Prairie Maid	Sinai Fire
Candymint Sargent	Golden Delicious	Prairifire	*M. spectablis*
Christmas Holly	Golden Raindrops	Profusion	Sugar Tyme
M. coronaria	Hopa	*M. pumila*	Van Eseltine
David	Indian Magic	Ralph Shay	White Angel
Dolgo	Island	Red Jade	Williams Pride
Donald Wyman	Katherine	Red Baron	Winter Gold
Dorothea	Lancelot	Sargent	Yellow Delicious
Doubloons	Louisa	*M. sargentii*	*M. zumi Calocarpa*

TABLE 4: Intolerant Plants – **Do Not Apply UPGRADE to these species or varieties.**

COMMON NAME	BOTANICAL NAME
Apple	*Malus domestica*
Crabapple - Flame variety	*Malus spp.*
Crabapple - Brandywine variety	*Malus spp.*
Crabapple - Novamac variety	*Malus spp.*
Cherry, Flowering - Yoshina variety	*Prunus yedoensis.*
Leatherleaf Fern and Other Ferns for cut foliage	*Rumohra adianformis* and other species for cut foliage
Privet	*Ligustrum spp.*

Conifers including Christmas Trees
UPGRADE may be used to control certain diseases on conifers in production (indoor and outdoor) and landscape situations. Please see the Ornamental Section above for more detailed directions for use in landscape situations.

Target Disease	Use Rate fluid ounces product/A (lb a.i/A)	Application Directions

This page contains no comments

Diplodia tip blight *(Diplodia pinea)* Lophodermium needlecast *(Lophodermium pinastri)* Swiss needlecast *(Phaeocrytopus gaumannii)*	6.2-15.4 (0.1-0.25)	Begin applications prior to disease development and continue throughout the season at 7-21-day intervals following the resistance management guidelines. Apply by ground, air, or chemigation. An adjuvant may be added at label specified rates. Do not make more than two (2) sequential applications of this product or other Group 11 fungicides before alternating with a fungicide that has a different mode of action.
Specific Use Restrictions: Do not exceed 1 gallon of this product/Acre per season.		

COMMERCIAL PRODUCTION ROSES

Target Disease	Use Rate fluid ounces product/A (lb a.i/A)	Application Directions
Downy Mildew *(Peronospora sparsa)* Powdery Mildew *(Spherotheca pannosa)* Rust *(Phragmidium mucronatum, P. tuberculatum, and other Phragmidium spp.* Septoria Leaf Spot *(Septoria rosea)* Alternaria Leaf Spot *(Alternaria alternata)*	3.1-15.4 (0.05-0.25)	Heritage application should begin prior to disease development and continue throughout the season on 7-21 day intervals following the resistance management guidelines. Applications may be made by ground, air or chemigation. An adjuvant may be added at recommended rates. Do not make more than 4 sequential applications of Upgrade before alternating with a fungicide that is not in Group 11. Do not make more than 8 applications per acre per year.
Specific Use Restrictions: Do not exceed 1 gallon of this product/Acre per season.		

BRASSICA - LEAFY GREENS Subgroup 5B

Broccoli Raab; Chinese Cabbage (bok choy); Collards; Kale; Mizuna; Mustard Greens; Mustard Spinach; Rape Greens; all Cultivars and/or Hybrids of these

Target Disease	Use Rate fl oz product/A (lb a.i/A)	Application Directions
Black spot *(Alternaria spp.)* Cercospora leaf spot *(Cercospora spp.)* White rust *(Albugo candida)*	6.0-15.5 (0.10-0.25)	Begin applications prior to disease development and continue throughout the season at 7- to 14-day intervals following the resistance management guidelines. Apply by ground, air, or chemigation. An adjuvant may be added at label specified rates. Do not make more than one application of this product or other Group 11 fungicides before alternating with a fungicide that has a different mode of action.
Soilborne Diseases Seedling Root Rot, Basal Stem Rot *(Rhizoctonia solani)*	0.40-0.80 fl oz/1000 row ft	For soilborne/seedling disease control, see directions and rates under **SOILBORNE/SEEDLING DISEASE CONTROL** section.

This page contains no comments

Use Limitations:
Do not exceed 46 fl oz of this product/Acre per season.
Do not exceed the equivalent of 0.75 lb a.i./Acre per season from any azoxystrobin-containing products.
Pre-harvest interval (PHI) = 0 Day.

CUCURBIT VEGETABLES, Crop Group 9

Cantaloupe; Chayote; Chinese-Waxgourd; Cucumber; Gourds; Honeydew Melon; *Momordica* spp. (bitter melon, balsam apple); Muskmelon; Watermelon; Pumpkin; Squash; Zucchini; Varieties, Cultivars and/or Hybrids of these

Target Disease	Use Rate fl oz product/A (lb a.i/A)	Application Directions
Anthracnose (*Colletotrichum lagenarium*) Belly rot (*Rhizoctonia solani*) Downy mildew (*Pseudoperonospora cubensis*) Gummy stem blight (*Didymella bryoniae*) Leaf spots (*Alternaria* spp., *Cercospora* spp.) Myrothecium canker (*Myrothecium roridum*) Plectosporium blight (*Plectosporium tabacinum*) Powdery Mildew (*Sphaerotheca fuliginea*), (*Erysiphe cichoracearum*) Ulocladium Leaf Spot (*Ulocladium cucurbitae*)	6.0-15.5 (0.10-0.25)	For downy mildew and powdery mildew, make preventative applications at 5- to 7-day intervals. For belly rot control, make the first application at the 1-3 leaf crop stage with a second application just before vines tip over or 10-14 days later, whichever occurs first. For all other diseases, begin applications prior to disease development and continue throughout the season at 7- to 14-day intervals following the resistance management guidelines. Apply by ground, air, or chemigation. An adjuvant may be added at label specified rates. Do not tank mix this product with crop oil concentrates (COC), methylated spray oil (MSO) or silicon adjuvants. Do not tank mix this product with malathion, Kelthane®, Thiodan®, Phaser®, Lannate®, Lorsban®, M-Pede® or Botran®. Do not make more than one application of this product or other Group 11 fungicides before alternating with a fungicide that has a different mode of action. Do not make more than four (4) foliar applications of this product or other Group 11 fungicides per crop per acre per year.
Soilborne diseases Rhizoctonia root rot (*Rhizoctonia solani*)	0.4-0.8 fl oz/1000 row ft	For soilborne/seedling disease control, see directions and rates under **SOILBORNE/SEEDLING DISEASE CONTROL** section.

Use Limitations:
Do not exceed 92.3 fl oz of this product/Acre per season.
Do not exceed the equivalent of 1.5 lb a.i./Acre per season from any azoxystrobin-containing products.
Pre-harvest Interval (PHI) = 1 Day.

FRUITING VEGETABLES – PEPPER / EGGPLANT Subgroup 8-10B *

African Eggplant; Bell Pepper; Eggplant; Martynia; Nonbell Pepper; Okra; Pea Eggplant; Pepino; Roselle; Scarlet Eggplant; Cultivars, Varieties, and/or Hybrids of these

For use on tomatoes, see crop specific Application Directions for Tomato Subgroup 8-10A

Target Disease	Use Rate fl oz product/A (lb a.i/A)	Application Directions
Anthracnose (*Colletotrichum* spp.) Powdery Mildew (*Sphaerotheca* spp.)	6.0-15.5 (0.10-0.25)	Begin applications prior to disease development and continue throughout the season at 7- to 14-day intervals following the resistance management guidelines. Apply by ground, air, or chemigation. An adjuvant may be added at label specified rates. Do not make more than one application of this product or other Group 11 fungicides before alternating with a fungicide that has a different mode of action.

This page contains no comments

Soilborne diseases Rhizoctonia seedling rot *(Rhizoctonia solani)*	0.4-0.8 fl oz/1000 row ft	For soilborne/seedling disease control, see directions and rates under **SOILBORNE/SEEDLING DISEASE CONTROL** section.
Use Limitations: Do not exceed 61.5 fl oz of this product/Acre per season. Do not exceed the equivalent of 1.0 lb a.i./Acre per season from any azoxystrobin-containing products. Pre-harvest Interval (PHI) = 0 Day.		

HERBS & SPICES (Except Black Pepper), Crop Group 19

Allspice; Angelica; Anise (seed); Anise (star); Annatto (seed); Balm; Basil; Borage; Burnet; Camomile; Caper (buds); caraway; Caraway (black); cardamom; Cassia Bark; Cassia Buds; Catnip; Celery Seed; Chervil (dried); Chinese Chive; Chive; Cinnamon; Clary; Clove Buds; Coriander Leaf (cilantro or Chinese parsley); Coriander Seed (cilantro); Costmary; Culantro (leaf); Culantro (seed); Cumin; Curry (leaf); Dill (dillweed); Dill (seed); Fennel (common); Florence Fennel (seed); Fenugreek; Grains of Paradise; Horehound; Hyssop; Juniper Berry; Lavender; Lemongrass; Lovage (leaf); Lovage (seed); Mace; Marigold; Marjoram; Mustard (seed); Nasturtium; Nutmeg; Parsley (dried); Pennyroyal; Pepper (black and white); Poppy (seed); Rosemary; Rue; Saffron; Sage; Savory (summer and winter); Sweet Bay; Tansy; Tarragon; Thyme; Vanilla; Wasabi, Wintergreen; Woodruff; Wormwood

Target Disease	Use Rate fl oz product/A (lb a.i/A)	Application Directions
Corynespora blight *(Corynespora cassiicola)* Dill blight *(Cercosporidium punctum)* Phoma blight *(Passalora puncta)*	6.0-15.5 (0.10-0.25)	Begin applications at the onset of disease development and continue throughout the season at 7-day intervals following the resistance management guidelines. Apply by ground only. An adjuvant may be added at label specified rates. Use a minimum of 30 gallons of water per acre. Do not make more than two (2) sequential applications of this product or other Group 11 fungicides before alternating with a fungicide that has a different mode of action.
Fusarium Rhizome and Root Rot (*Pythium* spp.)	6.2-15.4 (0.10-0.25)	**For Wasabi only**: Begin applications at the onset of disease development and continue throughout the season at 7-day intervals following the resistance management guidelines. Apply by ground or chemigation. An adjuvant may be added at label specified rates. Use a minimum of 30 gallons of water per acre. Do not make more than two (2) sequential applications of this product or other Group 11 fungicides before alternating with a fungicide that has a different mode of action.
Use Limitations: Do not exceed 92.3 fl oz of this product/Acre per season. Do not exceed the equivalent of 1.5 lb a.i./Acre per season from any azoxystrobin-containing products. Pre-harvest Interval (PHI) = 0 Day.		

LEAFY VEGETABLES (Except Brassica)

Amaranth, Arugula, Cardoon, Celery, Celtuce, Chervil, Chrysanthemum (edible), Corn salad, Cress, Dandelion, Dock, Endive, Fennel, Lettuce (head and leaf), Orach, Parsley, Purslane, Radicchio, Rhubarb, Spinach, Swiss Chard, Cultivars, Varieties, and/or Hybrids of these

Target Disease	Use Rate fl oz product/A (lb a.i/A)	Application Directions

This page contains no comments

Foliar Diseases Alternaria leaf spot *(Alternaria sonchi, A. spp.)* Anthracnose *(Microdochium panattonianum, Colletotrichum dematium)* Cercospora leaf spot (*Cercospora* spp.) Septoria leaf spot *(Septoria petroselini)* White rust *(Albugo occidentalis)*	6.0-15.5 (0.10-0.25)	<u>For downy and powdery mildew</u>, make preventative applications at 5- to 7-day intervals. <u>For all other diseases</u>, begin applications prior to disease development and continue throughout the season at 7- to 14-day intervals following the resistance management guidelines. Apply by ground, air, or chemigation. An adjuvant may be added at label specified rates. Do not make more than one application of this product or other Group 11 fungicides before alternating with a fungicide that has a different mode of action.
Downy mildew *(Bremia lactucae)* Powdery mildew *(Eyrisiphe cichoracearum)*	12.0-15.5 (0.20-0.25)	**ATTENTION** Applications of this product to leafy vegetable foliage may contribute to foliar phytotoxicity under certain circumstances. Proceed with caution with regard to tank mixes and adjuvants when treating any leafy vegetable crops with this product. When treating leaf lettuce, do not tank mix this product with AMBUSH® WP, Pounce® WP, Aliette®, Warrior® with Zeon ™ Technology, or any other product that may increase the penetration of this product into the leaf surface such as, but not limited to, silicone wetters.
Soilborne Diseases Web blight, Bottom rot, Crater rot, Root rot *(Rhizoctonia solani)*	0.4-0.8 fl oz/ 1000 row ft	For soilborne/seedling disease control, see directions and rates under **SOILBORNE/SEEDLING DISEASE CONTROL** section.
Use Limitations: Do not exceed 92.3 fl oz of this product/Acre per season. Do not exceed the equivalent of 1.5 lb a.i./Acre per season from any azoxystrobin-containing products. Pre-harvest Interval (PHI) = 0 Day.		

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TOMATO Subgroup 8-10A

Bush Tomato; Cocona; Currant Tomato; Garden Huckleberry; Goji Berry; Groundcherry; Naranjilla; Sunberry; Tomatillo; Tomato; Tree Tomato; Cultivars, Varieties, and/or Hybrids of these

Target Disease	Use Rate fl oz product/A (lb a.i/A)	Application Directions
Anthracnose *(Colletotrichum coccodes)* Black mold *(Alternaria alternata)* Buckeye rot *(Phytophthora spp.)* Early blight *(Alternaria solani)* Powdery Mildew *(Oidiopsis sicula)* Septoria Leaf Spot *(Septoria lycopersici)* Target spot *(Corynespora cassiicola)*	5.0-6.2 (0.08-0.10)	Begin applications prior to disease development and continue throughout the season following the resistance management guidelines. Apply by ground, air, or chemigation. For late blight, apply this product at 5- to 7- day intervals. For all other tomato diseases, make applications at 7- to 21-day intervals. Use of adjuvants may result in severe phytotoxicity. Do not exceed 0.125% adjuvant (v/v). Thank mixtures with dimethoate may cause phytotoxicity. For fresh market tomatoes, do not use adjuvants or tank mix this product with other pesticides formulated as emulsifiable concentrates (EC). Do not make more than one application of this product or other Group 11 fungicides before alternating with a fungicide that has a different mode of action.
Late Blight *(Phytophthora infestans)*	6.2 (0.10)	
Use Limitations: Do not exceed 37 fl oz of product/Acre per season. Do not exceed the equivalent of 0.6 lb a.i./Acre per season from any azoxystrobin-containing product. Pre-harvest Interval (PHI) = 0 Day.		

This page contains no comments

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage and disposal.

PESTICIDE STORAGE Store in original containers only. Keep container closed when not in use. Do not store near food or feed. In case of spill on floor or paved surfaces, mop and remove to chemical waste storage area until proper disposal can be made if product cannot be used according to the label.

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative of the nearest EPA Regional Office for guidance.

CONTAINER HANDLING:

[Note to Reviewer: The following statement will be included on all Final Printed Labels bearing multiple Container Handling statements] **"NOTE:** This product is available in multiple containers. Refer to the Net Contents section of this product's labeling for the applicable "Nonrefillable" or "Refillable" designation. Follow the container handling instructions below that apply to your container type/size."

[Nonrefillable Containers 5 Gallons or Less]

Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. **Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke.

[Nonrefillable containers larger than 5 gallons]

Nonrefillable container. Do not reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure-rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

[Refillable containers larger than 5 gallons]

Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times

WARRANTY DISCLAIMER

The directions for use of this product must be followed carefully. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, (1) THE GOODS DELIVERED TO YOU ARE FURNISHED "AS IS" BY MANUFACTURER OR SELLER AND (2) MANUFACTURER AND SELLER MAKE NO WARRANTIES, GUARANTEES, OR REPRESENTATIONS OF ANY KIND TO BUYER OR USER, EITHER EXPRESS OR IMPLIED, OR BY USAGE OF TRADE, STATUTORY OR OTHERWISE, WITH REGARD TO THE PRODUCT SOLD, INCLUDING, BUT NOT LIMITED TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, USE, OR ELIGIBILITY OF THE PRODUCT FOR ANY PARTICULAR TRADE USAGE. UNINTENDED CONSEQUENCES, INCLUDING BUT NOT LIMITED TO INEFFECTIVENESS, MAY RESULT BECAUSE OF SUCH FACTORS AS THE PRESENCE OR ABSENCE OF OTHER MATERIALS USED IN COMBINATION WITH THE GOODS, OR THE MANNER OF USE OR APPLICATION, INCLUDING WEATHER, ALL OF WHICH ARE BEYOND THE CONTROL OF MANUFACTURER OR SELLER AND ASSUMED BY BUYER OR USER. THIS WRITING CONTAINS ALL OF THE REPRESENTATIONS AND AGREEMENTS BETWEEN BUYER, MANUFACTURER AND SELLER, AND NO PERSON OR AGENT OF MANUFACTURER OR SELLER HAS ANY AUTHORITY TO MAKE ANY REPRESENTATION OR WARRANTY OR AGREEMENT RELATING IN ANY WAY TO THESE GOODS.

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LIMITATION OF LIABILITY

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, IN NO EVENT SHALL MANUFACTURER OR SELLER BE LIABLE FOR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, OR FOR DAMAGES IN THEIR NATURE OF PENALTIES RELATING TO THE GOODS SOLD, INCLUDING USE, APPLICATION, HANDLING, AND DISPOSAL. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, MANUFACTURER OR SELLER SHALL NOT BE LIABLE TO BUYER OR USER BY WAY OF INDEMNIFICATION TO BUYER OR TO CUSTOMERS OF BUYER, IF ANY, OR FOR ANY DAMAGES OR SUMS OF MONEY, CLAIMS OR DEMANDS WHATSOEVER, RESULTING FROM OR BY REASON OF, OR RISING OUT OF THE MISUSE, OR FAILURE TO FOLLOW LABEL WARNINGS OR INSTRUCTIONS FOR USE, OF THE GOODS SOLD BY MANUFACTURER OR SELLER TO BUYER. ALL SUCH RISKS SHALL BE ASSUMED BY THE BUYER, USER, OR ITS CUSTOMERS. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BUYER'S OR USER'S EXCLUSIVE REMEDY, AND MANUFACTURER'S OR SELLER'S TOTAL LIABILITY SHALL BE FOR DAMAGES NOT EXCEEDING THE COST OF THE PRODUCT.

If you do not agree with or do not accept any of the directions for use, the warranty disclaimers, or limitations of liability, do not use the product and return it unopened to the Seller, and the purchase price will be refunded.

(RV030314)

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Recommendation of Division Directors
Negotiated Due Dates

Decision #: 483695	Registration #: 228-TEU	Petition #: N/A

☐ *See page 2 for additional registration entries*

Chemical Name: Azoxystrobin

Fee Category: R300		**PRIA Decision Time Frame:** 4	
Submitted by: Erin	Malone	**Branch:** OCSPP/OPP/RD	**Date:** 02/12/2014

Company: Nufarm Americas, Inc.

Original PRIA Due Date: 02/18/2014	**Proposed New PRIA Due Date:** 03/11/2014

Previous Negotiated Due Dates:

Is the "Fix" in-house? ☐ Yes ☑ No ☐ n/a	**If not, date "Fix" expected:** 02/18/2014

Negotiated Due Date Reason:

Additional Data Required	☐ Product Chemistry	☐ Toxicology	☐ Acute Tox	☐ Environmental	
	☐ Efficacy	☐ Ecological	☐ Residue	☐ Other	
Data Deficiencies	☐ Product Chemistry	☐ Acute Tox	☐ Efficacy	☐ Residue	☐ Toxicology
	☐ Environmental	☐ Ecological	☑ Labeling	☐ Other	☐ Not Submitted
Late Risk Assessment	☐ Human Health	☐ Ecological			
Interim Consideration	☐ Agency Initiated	☐ Registrant Initiated			

☐ CSF	☐ Public Process	☐ Risk Issues Environmental	☐ Risk Issues Human Health
☐ Impurities Review	☐ Label	☐ Administrative-FR Notice	☐ Other – Commeot Field

Summary of Deficiency Type(s): ☐ **Not Submitted (N)** ☐ **Deficiencies (D)**

Product Chemistry: ☐ **Acute Tox:** ☐ **Efficacy:** ☐ **Labeling:** ☐ **Ecological Data:** ☐ **Other (describe):** ☐

There are extensive corrections needed to the proposed label.

Describe Interactions with Company (describe when contacted and company's response including response to previous negotiated due dates):

Emailed needed revisions to registrant on 2/7/14. Followed up with another revision on 2/11/14 after consultation with HED. Due to the extent of the corrections needed and the upcoming holiday weekend, we agreed on a 3 week renegotiation for turn around time on the label and to allow for PM review.

"75 Day" Letter sent? ☐ **Yes, Date sent** ☑ **No and reason for none?** *Add comments on page 2*

Rationale for Proposed Due Date: Time for resubmission from registrant and follow-up PM team review.

Registrant notified that this is the last negotiation? ☐ **Yes** ☑ **Not Applicable**

Approve: ☑	**Disapprove:** ☐

If disapproved, action to be taken:

OD or DOD Signature: *CN=Marty Monell/OU=DC/O=USEPA/C=US*	**Date:** *02/19/2014*

Decision #: 483695	Registration #:228-TEU	Petition #: N/A

Issue(s) (describe in detail):

Although an R300, this action needed a lot of attention to ensure the cited use rates were converted correctly from the cited product. Therefore, the revisions were sent to the registrant a bit late in the review process and did not allow for enough time for turnaround on the label before the PRIA date.

Comment(s):

A 75 day deficiency letter was not needed because the only "deficiency" is that the label needs a lot of corrections that will take time for the registrant to complete and for the PM team to review and ensure were completed. If the registrant does not agree to any of these needed revisions then a 75 day letter may be needed.

Audit Trail for

Recommendation of Division Directors Negotiated Due Dates

PDF Name: PRIAv5.pdf
Form Number: PRIA
Document Identifier: PRIA-14043080308-EM

SUBMITTED on 02/12/2014 at 08:24:11 AM by CN=Erin Malone/OU=DC/O=USEPA/C=US

APPROVED on 02/12/2014 at 12:16:18 PM by CN=Cynthia Giles-Parker/OU=DC/O=USEPA/C=US

TAKEN BACK on 02/12/2014 at 01:47:18 PM by CN=Erin Malone/OU=DC/O=USEPA/C=US

SUBMITTED on 02/12/2014 at 01:48:22 PM by CN=Erin Malone/OU=DC/O=USEPA/C=US

APPROVED on 02/12/2014 at 02:56:14 PM by CN=Cynthia Giles-Parker/OU=DC/O=USEPA/C=US

APPROVED on 02/18/2014 at 01:53:05 PM by CN=Lois Rossi/OU=DC/O=USEPA/C=US

APPROVED AND COMPLETED on 02/19/2014 at 07:19:39 AM by CN=Marty Monell/OU=DC/O=USEPA/C=US

From: carrie.tackema@us.nufarm.com
To: Malone, Erin
Subject: RE: Label revisions needed for 228-TEU
Date: Wednesday, February 12, 2014 7:54:33 AM

Erin,

Nufarm will agree to the 3 week extension for D#483695 product 228-TEU

Best regards,
Carrie

Nufarm
Carrie M. Tackema
Regulatory Manager
Nufarm Americas, Inc.
4020 Aerial Center Parkway, Suite 101
Morrisville, NC 27560

☎: (919) 379-2528 (Office)
☎: (919) 323-1368 (Cell)
7: (919) 467-5923 (Fax)
✉: carrie.tackema@us.nufarm.com

From: "Malone, Erin" <Malone.Erin@epa.gov>
To: "carrie.tackema@us.nufarm.com" <carrie.tackema@us.nufarm.com>,
Date: 02/11/2014 01:27 PM
Subject: RE: Label revisions needed for 228-TEU

Carrie,

I have an additional revision for the label:
On page 13, can you please delete references to "sprenching" under [7] Soilborne Diseases? We have determined that this is a new application technique that would need to be fully evaluated by HED before it can be added to the label and does not fall within the PRIA category of this action.

We will also need to discuss renegotiation at this point as the PRIA date is next Tuesday and with the impending snow storm and holiday weekend we do not even have a full work week ahead of us. Since I will still need to review after your resubmission and my PM will need to do her full review, I think a renegotiation of 3-4 weeks will be necessary. Would you agree to a renegotiated due date of 3/11/14 to allow for your resubmission and another 3 weeks for our review? Please reference D#483695 and product 228-TEU in your response.

Thanks,
Erin

Erin Malone
Risk Manager
EPA/OCSPP/OPP/RD/FB
(703) 347-0253

From: Malone, Erin
Sent: Friday, February 07, 2014 3:07 PM
To: 'carrie.tackema@us.nufarm.com'
Subject: Label revisions needed for 228-TEU

Carrie,

I have finished up my label review for Upgrade Fungicide. I have two questions still pending with HED but wanted to send the label to you know as you will see there are a lot of comments and revisions needed. Please call me if you have questions. I will follow up with you early next week if HED as any concerns with the inquiries I sent up to them.

Thanks,
Erin

Erin Malone
Risk Manager
EPA/OCSPP/OPP/RD/FB
(703) 347-0253

Nufarm Americas Inc. and its affiliated companies.
Fax: +1 708 377 1333.

Group 11 Fungicide

UPGRADE™ Fungicide

Broad spectrum fungicide for the control of turf and ornamental plant diseases

ACTIVE INGREDIENT	
Azoxystrobin (methyl (E)-2-{2-[6-(2-cyanophenoxy)pyrimidin-4-yloxy}-phenyl)-3-methoxyacrylate	22.9%
OTHER INGREDIENTS	77.1%
TOTAL	100.0%

Contains 2.06 pounds of active ingredient per gallon

KEEP OUT OF REACH OF CHILDREN.

CAUTION / PRECAUTIÓN

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.
(If you do not understand the label, find someone to explain it to you in detail.)

SEE LABEL BOOKLET FOR FIRST AID AND PRECAUTIONARY STATEMENTS

EPA REG. NO. 228-XXX

EPA Est. No. _____

MANUFACTURED FOR
NUFARM AMERICAS INC.
11901 S. AUSTIN AVENUE
ALSIP, IL 60803

Nufarm

NET CONTENTS: _____ (Gal.) (_____ liters)

[Designation as "NONREFILLABLE" or "REFILLABLE" for containers > 5 GAL]

000228-00XXX.20130925.draft

Summary of Comments on Microsoft Word - 09252013.000228.00xxx.UPGRADE fungicide

Page: 1

Author: emalone Subject: Highlight Date: 1/22/2014 3:45:22 PM

Author: emalone Subject: Sticky Note Date: 1/22/2014 3:46:06 PM
You also have crop uses listed, but by this heading you would think that this product is only for turf and ornamentals. I would suggest adding reference to the crops listed as well.

Author: emalone Subject: Highlight Date: 1/31/2014 3:00:12 PM

Author: emalone Subject: Sticky Note Date: 1/31/2014 3:02:18 PM
See comment later in label regarding this calculation being off. Should be 2.04 with the density at 1.068 g/mL as stated in your product chem review.

FIRST AID	
IF ON SKIN OR CLOTHING	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.

HOTLINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact (877) 325-1840 for emergency medical treatment information.

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION / PRECAUCIÓN

Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing.

PERSONAL PROTECTIVE EQUIPMENT (PPE)
Some materials that are chemically resistant to this product are listed below. If you want more options follow the instructions for Category A on an EPA chemical resistance category selection chart.

Applicators and other handlers must wear:
- Long-sleeved shirt and long pants
- Chemical resistant gloves made of any waterproof material such as polyvinyl chloride, nitrile rubber or butyl rubber.
- Shoes plus socks

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions exist for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Controls
When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240 (d)(4-6), the handler PPE requirements may be reduced or modified as specified in the WPS.

IMPORTANT: When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for "applicators and other handlers" and have such PPE immediately available for use in an emergency, such as a spill or equipment breakdown.

USER SAFETY RECOMMENDATIONS

Users should:
- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Wash thoroughly with soap and water after handling.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to freshwater and estuarine/marine fish and aquatic invertebrates. Do not apply directly to water except as specified on this label. For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwater or rinsate.

The active ingredient, azoxystrobin, in this product can be persistent for several months or longer. Azoxystrobin has degradation products which have properties similar to chemicals which are known to leach through soil to ground water under certain conditions as a result of agricultural use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.

Notify State and/or Federal authorities and Nufarm immediately if you observe any adverse environmental effects due to use of this product.

Page: 2

Author: emalone Subject: Sticky Note Date: 1/22/2014 3:26:50 PM
Insert Physical or Chemical Hazards section that reads:
"PHYSICAL OR CHEMICAL HAZARDS
Do not mix or allow coming in contact with oxidizing agent. Hazardous chemical reaction may occur."

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

FAILURE TO FOLLOW THE USE DIRECTIONS AND PRECAUTIONS ON THIS LABEL MAY RESULT IN PLANT INJURY OR POOR DISEASE CONTROL

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), notification to workers, and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water is:

- Coveralls
- Chemical resistant gloves made of any waterproof material such as polyvinyl chloride, nitrile rubber or butyl rubber
- Shoes plus socks

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box only apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Turf and Landscape Uses: Do not enter or allow others to enter the treated area until sprays have dried.

PRODUCT INFORMATION

This product is a suspension concentrate (SC) or flowable formulation. It is a broad spectrum, preventive fungicide with systemic and curative properties recommended for the control of many important plant diseases. This product may also improve the yield and/or quality of the crop. These additional benefits are due to positive effects on plant physiology. The effects may vary according to factors such as the crop, crop hybrid, or environment. This product may be applied as a foliar spray in alternating spray programs or in tank mixes with other registered crop protection products. Make all applications according to the use directions on this label.

USE PRECAUTIONS AND LIMITATIONS

Some phytotoxicity may be observed when applying tank mixtures of this product with emulsifiable concentrate (EC) formulations. These effects may be enhanced if applications are made under cool, cloudy conditions and these conditions remain for several days following application. In addition, adjuvants that contain some forms of silicone may also contribute to phytotoxicity.

ATTENTION

This product is extremely phytotoxic to certain apple varieties.

AVOID SPRAY DRIFT. Extreme care must be used to prevent injury to apple trees (and apple fruit). Refer to SPRAY DRIFT MANAGEMENT information below.

DO NOT spray this product where spray drift may reach apple trees.

DO NOT spray apple trees with spray equipment previously used to apply this product. Even trace amounts of product may cause unacceptable phytotoxicity to certain apple and crabapple varieties.

Page: 3

Author: emalone Subject: Sticky Note Date: 2/5/2014 10:11:59 AM
Cited label with non-ag use box also includes the following language:
"Do not treat areas while unprotected humans or domestic animals are present in the treatment areas. Because certain states may require more restrictive reentry intervals, consult your State Department of Agriculture for further information.

Author: emalone Subject: Sticky Note Date: 2/5/2014 10:16:45 AM
Between your cited products, only 100-1093 allows use in greenhouses for ornamentals. Add restriction here "Do not use product in greenhouses except for applications to ornamentals."

SPRAY DRIFT MANAGEMENT

The interaction of many equipment and weather related factors determine the potential for spray drift.

DO NOT spray when conditions favor drift beyond the area intended for application. Conditions which may contribute to drift include thermal inversion, wind speed and direction, sprayer nozzle/pressure combinations, spray droplet size, etc. Contact your State Extension agent for spray drift prevention guidelines in your area.

DO NOT apply when weather conditions favor drift from treated areas to non-target aquatic habitat.

AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR.

INTEGRATED PEST MANAGEMENT (IPM)

To reduce the potential for development of resistance, integrate this product into an overall disease and pest management strategy whenever the use of a fungicide is required. Follow cultural practices known to reduce disease development such as selection of disease-tolerant varieties, removal of plant debris in which inoculum overwinters, and proper timing and placement of irrigation. Consult with your State Agricultural Experiment Station or Extension Service specialist for additional IPM strategies established for your area. This product may be used in State Agricultural Extension advisory (disease forecasting) programs which recommend application timing based on environmental factors favorable for disease development.

Crop Tolerance: Plant tolerance has been found to be acceptable for all crops on the label. However, not all possible tank mixture combinations have been tested under all conditions. It is recommended to test tank mixture combinations on a small portion of the crop to assess plant response before large scale applications. See the USE PRECAUTIONS AND LIMITATIONS section for apple phytotoxicity information.

RESISTANCE MANAGEMENT

This product is a Group 11 fungicide. The mode of action for azoxystrobin, the active ingredient in this product, is the inhibition of the Qol (quinone outside) site within the electron transport system as well as disruption of membrane synthesis by blocking demethylation [Group 11]. Fungal pathogens can develop resistance to products with the same mode of action when used repeatedly. Because resistance development cannot be predicted, use this product in accordance with resistance management strategies established for the crop and use area. Consult your local or State agricultural authorities for resistance management strategies that are complementary to those in this label. Resistance management strategies may include alternating and/or tank-mixing with products having different modes of action or limiting the total number of applications per season. Nufarm Americas Inc. encourages responsible resistance management to ensure effective long-term control of the fungal diseases on this label with Group 11 (Qol) fungicides.

Follow the crop specific resistance management recommendations provided in the directions for use.

If no resistance recommendation on number of applications is specified in the directions for use, follow the recommendations in the table below.

If planned total number of fungicide applications per crop is:	1	2	3	4	5	6	7	8	9	10	11	12
Recommended Solo Qol fungicide sprays	1	1	2	2	2	2	2	3	3	3	3	4
Recommended Qol fungicide sprays in mixture (tank-mix or formulated)	1	2	2	2	2	3	3	4	4	5	5	6

This page contains no comments

Under conditions requiring multiple fungicide applications, develop season long spray programs for Group 11 (QoI) fungicides. In crops where two sequential Group 11 fungicide applications are made, alternating with two or more applications of a fungicide that is not in Group 11 will help reduce the potential for resistance development. If more than 12 applications are made, observe the following guidelines:

- When a QoI fungicide is used as a solo product, make no more than 1/3 (33%) of the total number of fungicide applications per season with the QoI containing product.
- For programs including tank mixes or premixes of QoI fungicide with mixing partners of a different mode of action, the number of QoI containing applications must represent no more than 1/2 (50%) of the total number of fungicide applications per season.
- In programs including applications of QoI fungicides as both solo products and mixtures, the number of QoI containing applications must represent no more than 1/2 (50%) of the total number of fungicide applications per season.

If a Group 11 fungicide is applied to the seed or soil, do not make another application with a Group 11 fungicide for at least 3 weeks.

SOIL BORNE/SEEDLING DISEASE CONTROL

For crops that have specific use directions for soil borne disease control:

This product can provide control of many soil borne diseases if applied early in the growing season. Specific applications for soil borne diseases include in-furrow applications and banded applications applied over the row, either shortly after plant emergence or during herbicide applications or cultivation. These applications will provide control of pre- or postemergence damping off and diseases that infect plants at the soil-plant interface.

The use of either type of application depends on the regional cultural practices. In some locations, one type of application may provide better disease control than the other, depending on the timing of the disease epidemic. Seedling diseases are generally controlled by in-furrow applications while banded applications are more effective against soil borne diseases that develop later in the season. Consult your local expert to get some guidance regarding application type.

Under cool, wet conditions, crop injury from soil directed applications can occur.

Drip

Refer to the **Instructions for Use through Irrigation Systems (Chemigation) section.**

PRODUCT USE INSTRUCTIONS

Application: Thorough coverage is necessary to provide good disease control. Make no more spray solution than is needed for application. Avoid spray overlap, as crop injury may occur.

Adjuvants: The use of an adjuvant may improve consistency and performance of this product. Refer to crop specific directions for use for information regarding the use of adjuvants.

Efficacy: Under certain conditions conducive to extended infection periods, use another registered fungicide for additional applications once the maximum amount of this product has been used. If resistant isolates to Group 11 fungicides are present, product performance may be reduced for certain diseases. When heavy infection pressure exists, when treating varieties highly susceptible to disease, or when environmental conditions are conducive to disease development, best results are obtained when using the higher rates and/or the shorter spray intervals allowed in the crop specific use directions on this label..

MIXING AND APPLICATION INSTRUCTIONS

Spray Equipment

All types of spray equipment commonly used for ground and aerial applications may be used with this product. Proper adjustment and calibration of spraying equipment to give good canopy penetration and coverage is essential for good disease control.

Nozzles

- Equip sprayers with nozzles that provide accurate and uniform application.
- Use nozzles that are the same size and uniformly spaced across the boom.
- Calibrate sprayer before use.
- Use screens to protect the pump and to prevent nozzles from clogging.
- Use screens 16-mesh or coarser on the suction side of the pump.
- Do not place a screen in the recirculation line.

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Author: emalone Subject: Sticky Note Date: 2/5/2014 10:52:49 AM
You did not include more specific instructions here for banded and in-furrow applications like your cited product. Did you include that information somewhere else?

- Use 50-mesh or coarser screens between the pump and boom, and where required, at the nozzles.
- Check nozzle manufacturer's use guidelines.

Pump

- Use a pump with capacity to:
  a) Maintain 35 to 40 psi at nozzles.
  b) Provide sufficient agitation in tank to keep mixture in suspension. This requires recirculation of 10% of tank volume per minute.
- Use a jet agitator or liquid sparge tube for agitation.
- Do not air sparge.

For more information on spray equipment and calibration, consult sprayer manufacturers and state agricultural agency for advice. For specific local directions and spray schedules, consult your state agricultural agency for advice.

Spray Solution Preparation

- Proper mixing of this product with water requires use of a spray tank equipped with agitation.
- Prepare only the amount of spray solution required for immediate use. Do not allow spray mixture to stand overnight or for prolonged periods.
- Thoroughly clean spray equipment before preparing the spray solution.
- Maintain constant agitation throughout the spraying operation.
- Rinse spray tank thoroughly with clean water after each day's use and dispose of pesticide rinsate by application to an already treated area

Stand-alone product solution:

- Add ½ to ¾ of the required amount of water to a spray or mixing tank and begin agitation.
- Add the specified amount of this product to the tank.
- Continue agitation while adding the remainder of the water and allow time for good dispersion.
- Begin application of the spray solution after the product has completely dispersed in the mix water and maintain agitation during spraying.

Tank mixture with other products:

- Add ½ to ⅔ of the required amount of water to a spray or mixing tank and begin agitation.
- Add tank mix partners to the tank in the following order: 1) wettable powder and water dispersible granule (WDG) formulations, 2) liquid flowables (aqueous suspensions), and 3) emulsifiable concentrates.
- Allow the material to completely dissolve and disperse into the mix water.
- Continue agitation while adding the remainder of the water and this product to the tank mix and allow time for good dispersion
- Begin application of the spray mixture while maintaining agitation.

Compatibility

This product is compatible with many pesticides and additives commonly used in tank mixtures. To determine the physical compatibility of this product with other products prior to full scale use, conduct a jar test as follows: Using a quart jar, add the proportionate amounts of the tank mixture components to 1 qt. of water. Add wettable powders and water dispersible granule (WDG) products first, then liquid flowables, and emulsifiable concentrates last. Mix thoroughly and let stand for at least 5 minutes. If the combination remains mixed or can be remixed readily, it is physically compatible. Once compatibility has been confirmed, use the same procedure for adding required ingredients to the spray tank.

NOTE: Some phytotoxicity may be observed when applying tank mixtures of this product with emulsifiable concentrate (EC) formulations. These effects may be enhanced if applications are made under cool, cloudy conditions and these conditions remain for several days following application. In addition, adjuvants that contain some forms of silicone may also contribute to phytotoxicity.

INSTRUCTIONS FOR USE THROUGH IRRIGATION SYSTEMS (CHEMIGATION)

- Use only on crops for which chemigation is specified on this label.
- Apply this product through 1) sprinkler irrigation systems including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move; 2) drip irrigation systems. Do not apply this product through any other type of irrigation system.
- Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water
- Apply in 0.1-0.25 inches of water per acre. Excessive water may reduce efficacy

This page contains no comments

- If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers, or other experts.
- Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.
- A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

Spray Preparation: Clean chemical tank and injector system thoroughly. Flush system with clean water.

Drip Irrigation: This product may be applied through drip irrigation systems for soil-borne disease control. The soil should have adequate moisture capacity prior to drip application.

Terminate drip irrigation at fungicide depletion from the main feed supply tank or after 6 hours from start, whichever is shorter. For maximum efficacy, delay subsequent irrigation (water only) for at least 24 hours following drip application.

Sprinkler Irrigation

Apply this product through sprinkler irrigation systems including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move. Apply with center pivot or continuous-move equipment distributing 1/2 acre-inch or less during treatment. In general, use the least amount of water required for proper distribution and coverage. If stationary systems (solid set, handlines or wheel lines other than continuous-move) are used, inject this product into no more than the last 20-30 minutes of the set.

Do not apply when winds are greater than 10-15 mph to avoid drift or wind skips. Do not apply when wind speed favors drift beyond the area intended for treatment.

Plant injury, lack of effectiveness, or illegal pesticide residues in the crop may result from non-uniformly treated water. Thorough coverage of foliage is required for good control. Good agitation should be maintained during the entire application period.

If you have questions about calibration, contact your State Extension Service specialist, equipment manufacturer or other experts.

Operating Instructions:

1. Do not apply when wind speed favors drift beyond the area intended for treatment.
2. The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water-source contamination from backflow.
3. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
4. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
5. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
6. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
7. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
8. Allow sufficient time for pesticide to be flushed through all lines and all nozzles before turning off irrigation water. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.
9. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

Center Pivot Irrigation Equipment

Notes: (1) Use only with drive systems which provide uniform water distribution. (2) Do not use end guns when applying this product through center pivot systems as it may result in non-uniform application.

Author: emalone Subject: Pencil Date: 2/5/2014 9:57:00 AM

- Determine the size of the area to be treated.
- Determine the time required to apply 1/8 to 1/2 inch of water over the area to be treated when the system and injection equipment are operated at normal pressures as specified by the equipment manufacturer. When applying this product through irrigation equipment use the lowest obtainable water volume while maintaining uniform distribution. Run the system at 80-95% of the manufacturer's rated capacity.
- Using water, determine the injection pump output when operated at normal line pressure.
- Determine the amount of product required to treat the area covered by the irrigation system.
- Add the required amount of product and sufficient water to meet the injection time requirements to the solution tank.
- Make sure the system is fully charged with water before starting injection of the spray solution. Time the injection to last at least as long as it takes to bring the system to full pressure.
- Maintain constant agitation of the spray solution during the injection period.
- Continue to operate the system until the spray solution has cleared the sprinkler head.

Solid Set, Hand Move, and Moving Wheel Irrigation Equipment

- Determine the acreage covered by the sprinklers.
- Fill injector solution tank with water and adjust flow rate to use the contents over a 20 to 30-minute interval. When applying this product through irrigation equipment, use the lowest obtainable water volume while maintaining uniform distribution.
- Determine the amount of product required to treat the area covered by the irrigation system.
- Add the required amount of product into the same quantity of water used to calibrate the injection period.
- Operate the system at the same pressure and time interval established during the calibration.
- Stop injection equipment after treatment is completed. Continue to operate the system until the spray solution has cleared the last sprinkler head.

Specific Instructions for Public Water Systems

1. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
2. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, back-flow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, discharge the water from the public water system into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
3. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
4. The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
5. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. Do not apply when wind speed favors drift beyond the area intended for treatment.

SPECIFIC USE DIRECTIONS

TURF:
UPGRADE may be used for control of certain pathogens causing foliar, stem, and root diseases, including leaf and stem blights, leaf spots, patch diseases, mildews, anthracnose, fairy rings, molds, and rusts of turfgrass plants. UPGRADE may be used to control certain diseases on turf in golf courses, lawns and landscape areas around residential, institutional, public, commercial and industrial buildings, parks, recreational areas and athletic fields.

Integrated Pest (Disease) Management (IPM): Sound turf management resulting healthy, vigorous turf is the foundation of a good IPM program. Cultural practices such as proper choice of turf variety, nutrient-management, proper cutting height, thatch management, and proper watering, drainage, and

This page contains no comments

moisture stress management should be integrated with the use of fungicides to increase turf vigor and reduce the susceptibility to disease. immunoassay detection kits and extension service diagnostic services can assist in the early and accurate identification of causal organisms and corresponding selection of the proper fungicide when required.

Resistance Management: Some turf disease pathogens are known to have developed resistance to products used repeatedly for their control. UPGRADE should be applied at full use rates in a tank mix or alternation program with other registered fungicides that have a different mode of action and to which pathogen resistance has not developed. Since UPGRADE is a strobilurin fungicide, avoid alternation with other strobilurins, such as kresoxim-methyl and trifloxystrobin. Do not apply more than two [2] sequential UPGRADE applications for Gray Leaf Spot and *Pythium spp.* control. For all other diseases when Gray Leaf Spot and *Pythium spp.* are not present, do not apply more than three sequential applications of UPGRADE.

DIRECTIONS FOR APPLICATION FOR TURF DISEASES

Application Directions: UPGRADE should be applied prior to disease development. Mix UPGRADE with the required amount of water and apply as a dilute spray application in 1 to 3 gals. of water per 1000 sq. ft. (44-132 gals./A). Repeat applications at specified intervals for as long as required. For spot treatments, use **0.38** fl. oz. UPGRADE per 1 to 3 gals. of water. Do not apply more than **2.4** gals. product/acre/year (**7.1** fl. oz. product/1000 sq. ft./year). Applications may be made by ground only.

Dollar Spot: UPGRADE does not control dollar spot. During periods of dollar spot pressure, always mix UPGRADE with **Legend®**, **Spectro™**, **26/36®** or another dollar spot control fungicide. UPGRADE is compatible in tank mixes with many other fungicides that control dollar spot.

Target Diseases	Use Rate (fl. oz. product/ 1-2 pints/acre)	Application Interval (days)	Remarks*
Anthracnose *(Colletotrichum graminicola)*	0.38-0.77	14-28	Use preventatively. Begin applications when conditions are favorable for disease infection, prior to disease symptom development.
Brown Patch *(Rhizoctonia solani*	0.38-0.77 1-2	14-28	Apply when conditions are favorable for disease development.
Cool Weather Brown Patch Yellow Patch *(Rhizoctonia cerealis)*	0.77 2 pints/acre	28	Make one or two applications in fall or when conditions are favorable for disease development.
Fairy Ring *(Lycoperdon spp., Agrocybe pediades, and Bovistra plumbea)*	0.77 2 pints/acre	28	For prevention in Cool season turf, initiate applications in the spring when root zone soil temperatures reach 55-60° F. Make a second application using a 28day interval. Immediately after fungicide is applied, irrigate the area with sufficient water to move the active ingredient down into the crown and active root zone of the turf. The amount of water is dependent on the depth of the root zone. Do not use a wetting agent unless hydrophobic soil conditions exist. Fairy ring symptoms may take 2 to 3 weeks to disappear following application. Alternate with another fungicide with a different mode of action, such as Affirm®, Torque® or Prostar®. For hydrophobic areas, Use an appropriate wetting agent to effectively penetrate the hydrophobic zone commonly created with this disease.
Fusarium Patch *(Microdochium nivale)*	0.38-0.77 1-2 pints/acre	14-28	Use preventatively. Begin applications when conditions are favorable for disease infection, prior to disease symptom development.
Gray Leaf Spot *(Pyricularia grisea)*	0.38-0.77 1-2 pints/acre	14-28	Begin applications before disease is present and continue applications while conditions are favorable for disease development.

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Author: emalone Subject: Sticky Note Date: 1/27/2014 10:59:47 AM
the unit is incomplete in the header. I assume you intended 1,000 ft^2. Please put the pints/A rate in parentheses to clearly separate from the header unit.

Author: emalone Subject: Highlight Date: 1/27/2014 10:56:03 AM

Author: emalone Subject: Highlight Date: 1/27/2014 11:04:33 AM

Author: emalone Subject: Sticky Note Date: 1/27/2014 11:09:01 AM
I am not getting the equivalent of the fl oz/1,000 ft^2 when converting these pints/A rates. Double check these and correct if needed.

Leaf Rust Stem Rust Stripe Rust *(Puccinia spp.)*	0.38-0.77 1-2 pints/acre	14-28	Begin applications when conditions are favorable for disease infection, prior to disease symptom development.
Leaf Spot *(Bipolaris sorokiniana)*	0.38-0.77 1-2	14-21	Apply when conditions are favorable for disease development.
Melting Out *(Drechslera poae)*	0.38-0.77 1-2	14-21	Apply when conditions are favorable for disease development
Necrotic Ring Spot *(Leptosphaeria korrae)*	0.77 2 pints/acre	14-28	Apply when conditions are favorable for disease development.
Pink Patch *(Limonomyses roseipellis)*	0.38-0.77 1-2	14-28	Apply when conditions are favorable for disease development.
Powdery Mildew *(Erysiphe graminis)*	0.38-0.77 1-2 pints/acre	14-28	Begin applications when conditions are favorable for disease infections prior to disease symptom development.
Pythium Blight Pythium Root Rot *(Pythium aphanidermatum, Pythium* spp.)	0.77 2 pints/acre	10-14	Use preventatively. Begin applications when conditions are favorable for disease infection, prior to disease symptom development. During periods of prolonged favorable conditions, treat on the 10 day application interval. For use on newly seeded as well as established turf.

Target Diseases	Use Rate (fl. oz. product)	Application Interval (days)	Remarks*
Red Thread *(Laetisaria fuciformis)*	0.38-0.77 1-2	14-28	Apply when conditions are favorable for disease development.
Rhizoctonia Large Patch *(Rhizoctonia solani)*	0.77 2 pints/acre	14-28	Make one or two applications in fall or when conditions are favorable for disease development.
Rhizoctonia Leaf Spot *(Rhizoctonia zeae)*	0.77 2	14-28	Apply when disease conditions are favorable for disease development.
Southern Blight *(Sclerotium rolfsii)*	0.38-0.77 1-2	14-28	Apply when conditions are favorable for disease development.
Spring Dead Spot *(Leptosphaeria korrae)* or *(Gaeumannomyces graminis var. graminis)* or *(Ophiosphaerella herpotricha)*	0.77 2 pints/acre	21-28	Apply applications approximately when soil temps in the root zone reach 80F, but approximately two months prior to bermudagrass dormancy. Water application into root zone. 1/4" to 1/2" of irrigation directly after application is recommended. Reapply 14 to 28 days later. Tank mixing with other SDS products such as Torque may enhance control under severe disease pressure.
Snow Molds Gray Snow Mold Typhula Blight *(Typhula incarnata)* Pink Snow Mold *(Microdochium nivale)*	0.77 - 1.35 2 - 3 2/3 pints/acre	single application	Make a single application of 0.77 - 1.35 fl. oz, in late fall just before snow cover. Tank mixing with other snow mold fungicides, such as Torque, 26/36, Legend, or Spectro may enhance control under severe disease pressure.
Summer Patch *(Magnaporthe poae)*	0.38-0.77 1-2	14-28	Apply when conditions are favorable for disease development.
Take-all Patch *(Gaeumannomyces graminis var. avenae)*	0.77 2 pints/acre	28	Begin applications when conditions are favorable for disease infection, prior to disease symptom development. Make two applications, 28 days apart in the spring and two applications 28 days apart in the fall.
Zoysia Patch *(Rhizoctonia solani and/or Gaeumannomyces incrustans)*	0.38-0.77 1-2 pints/acre	14-28	Apply 1 or 2 applications approximately one month prior to zoysiagrass dormancy. Reapply 14 to 28 days later.

*Do not apply more than two sequential applications of UPGRADE for control of Gray Leaf Spot and *Pythium* spp. For all other diseases when Gray Leaf Spot and *Pythium* spp. are not present, do not apply more than three sequential applications of UPGRADE.

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Author: emalone Subject: Sticky Note Date: 1/27/2014 11:26:04 AM
Why is there a separation in the table? It either needs to be cohesive or there needs to be another header here explaining how this table is different from the previous one.

Author: emalone Subject: Highlight Date: 1/27/2014 10:56:06 AM

Author: emalone Subject: Highlight Date: 1/27/2014 11:17:31 AM

Author: emalone Subject: Sticky Note Date: 1/27/2014 11:18:15 AM
Delete extra parentheses and correct "solar" to read "solani"

Author: emalone Subject: Cross-Out Date: 1/27/2014 11:19:43 AM

Author: emalone Subject: Cross-Out Date: 1/27/2014 11:19:47 AM

Author: emalone Subject: Cross-Out Date: 1/27/2014 11:19:50 AM

Author: emalone Subject: Cross-Out Date: 1/27/2014 11:19:40 AM

Author: emalone Subject: Sticky Note Date: 1/27/2014 11:24:47 AM
This disease is not listed on the cited product label. Delete crossed out text.

Author: emalone Subject: Highlight Date: 1/27/2014 11:21:27 AM

Author: emalone Subject: Sticky Note Date: 1/27/2014 11:24:22 AM
Change "our" to "or"

Author: emalone Subject: Highlight Date: 1/27/2014 11:24:27 AM

Author: emalone Subject: Highlight Date: 1/27/2014 11:21:37 AM

Author: emalone Subject: Sticky Note Date: 1/27/2014 11:22:15 AM
This contradicts application interval section. Cited product has 14-28 days listed so change 21-28 to 14-28

Author: emalone Subject: Sticky Note Date: 1/27/2014 11:27:46 AM
Add a comma or go to next line between Gray Snow Mold and Typhula Blight.

Author: emalone Subject: Highlight Date: 1/27/2014 11:37:39 AM

Author: emalone Subject: Sticky Note Date: 1/27/2014 11:37:49 AM
zoysiagrass

UPGRADE Rate Conversion Chart for Turf

Fl. Oz. Product Per 1000 Sq. Ft.	Oz. a.i. Per 1000 Sq. Ft.	Pints Product Per Acre
0.38	0.009	1.03
0.58	0.014	1.55
0.77	0.013	2.10
0.96	0.018	2.61
1.15	0.018	3.13
1.35	0.022	3.67

Small Volume Application - Amount of UPGRADE to Mix per Gallon for Turf Applications

UPGRADE Use Rate fl. oz./1000 sq. ft.	Amount UPGRADE per volume (milliliters)		
	1 gallons	3 gallons	5 gallons
0.38	11.2	33.6	56.0
0.58	17.2	51.6	86.0
0.77	22.8	68.4	114.0
0.96	28.4	85.2	142.0
1.15	34.0	102.0	170.0
1.35	39.9	119.7	199.5

ORNAMENTALS
UPGRADE is recommended for control of certain pathogens causing foliar, aerial, and root diseases, including leaf, tip, and flower blights, leaf spots, downy mildew, powdery mildew, anthracnose, and rusts of ornamental plants. UPGRADE may be used to control listed diseases of herbaceous, deciduous and evergreen ornamentals and listed vegetable transplants grown in greenhouses, lath houses, hoop houses, and shadehouses, and herbaceous, deciduous and evergreen ornamentals grown in field, container, nurseries, retail nurseries, and other residential and commercial landscape areas.

Integrated Pest (Disease) Management:
UPGRADE should be integrated into an overall disease management strategy that includes selection of varieties with disease tolerance, optimum plant populations, proper fertilization, winter and/or spring pruning, plant residue management and proper timing and placement of irrigation.

Resistance Management: Some ornamental disease pathogens are known to have developed resistance to fungicides used repeatedly for their control. UPGRADE should be applied in an alternation or tank mix program with other registered fungicides that have a different mode of action and to which pathogen resistance has not developed. Do not make more than two (2) sequential applications of UPGRADE before alternating with a fungicide of a different mode of action. Do not alternate UPGRADE with other FRAC 11 or strobilurin fungicides.

Application Directions: Apply UPGRADE as a broadcast or banded spray targeted at the foliage or crown of the plant. Apply to runoff in sufficient water to ensure complete coverage of the target plant. Good coverage and wetting of foliage is necessary for best control. Refer to the label for specific use directions for control of certain diseases. Repeat applications at specified intervals (plus alternations for resistance management) for as long as required. Applications may be made by ground only.

UPGRADE applications should begin prior to disease development and continue throughout the season at specified intervals following resistance management guidelines. UPGRADE works best when used as part of a preventative disease management program.

Use only surfactants approved for ornamental plants in combination with UPGRADE. Do not use silicone based products with Heritage Fungicide due to possible phytotoxicity. Always test tank mixes on a small group of representative plants prior to broad scale use.

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Author: emalone Subject: Highlight Date: 1/31/2014 2:56:37 PM

Author: emalone Subject: Sticky Note Date: 1/31/2014 3:03:00 PM
Couple of issues here.
- The calculations for the second and third columns are off. I calculated 0.098 oz. ai per 1,000 ft^2 and 0.095 pints product per acre for the 0.38 fl. oz entry. Please correct these calculations.
- Secondly, in doing my calculations I checked the density of the product that you have listed on your cel and found your calculation of 2.08 lbs/AI/gallon to be off. I calculated it to be 2.04.
- Lastly, this table on the cited product has a lot more information that could be helpful to the use like ounces of product per acre and pounds product per acre. I would add these columns in as well.

Author: emalone Subject: Sticky Note Date: 2/5/2014 10:44:31 AM
This is not an ornamental use allowed on the cited label. Please delete.

Author: emalone Subject: Highlight Date: 2/5/2014 2:20:09 PM

Apply UPGRADE at use rates of 1.9-7.7 fluid ounces/100 gallons every 7-28 days (or as otherwise specified for a specific plant or disease). The addition of a non-silicone based wetter-sticker at the recommended use rate may enhance coverage on hard-to-wet plant foliage.

Under most conditions and for most diseases, apply 3.9-7.7 fluid ounces/ 100 gallons on a 7-14 day interval.

Under light to moderate disease pressure, use the lower rates (1.9-3.9 fl oz/100 gallons) on a 7-14 day interval or the higher rates (5.8-7.7 fl oz/100 gallons) on a longer 14-28 day interval.

Under environmental conditions which promote severe disease development, use the higher rates (5.8-7.7 fl oz/100 gallons) on a 7-14 day interval. Use of UPGRADE as a "rescue" (late curative or eradicant) treatment may not always result in satisfactory disease control.

In addition, do not tank mix UPGRADE with other fungicides, insecticides, herbicides, fertilizers, adjuvants, etc, unless local experience indicates that the tank mix is safe to ornamental plants.

Drench Application: UPGRADE may be applied to control soilborne, seedling, and crown diseases of production ornamentals (greenhouse, hoop house, lath house, shadehouse, and field or container grown) as a preventative, drench treatment prior to infection. Good coverage of the pre-infection area (root zone, root ball, crown, etc.) is necessary for satisfactory control. UPGRADE may be drench applied to container grown ornamentals using 0.39-1.7 fluid ounces/100 gallons of water. Apply 1-2 pints of the solution per square foot surface area on a 7-28 day interval. Apply drench prior to infection as healthy roots are necessary to optimize product uptake, systemic translocation and disease protection. For resistance management do not make more than three sequential drench applications of UPGRADE before alternating with a fungicide of a different mode of action. Caution should be taken before making application of UPGRADE as a drench to small bedding plants in the seedling/plug stage due to possible phytotoxicity. A limited quantity of plants should be tested prior to full-scale application.

Drip Irrigation: UPGRADE may be applied through drip irrigation systems to potted ornamentals or to bedded, field grown ornamentals for soil-borne disease control. Apply 3.9-30.8 fluid ounces UPGRADE per acre as a preventative disease application. The soil or potting media should have adequate moisture capacity prior to drip application. Terminate drip irrigation at fungicide depletion from the main feed supply tank or after 6 hours from start, whichever is shorter. For maximum efficacy, subsequent irrigation (water only) should be delayed for at least for 24 hours following drip application.

General Ornamental Use Precautions

Do not apply UPGRADE to apple or cherry trees (Flowering, Yoshina variety) due to possible phytotoxicity. Furthermore, do not use spray equipment that has applied UPGRADE for use in these sensitive crops due to possible phytotoxicity from residue remaining in the sprayer. UPGRADE may be applied to certain varieties of crabapple for control of apple scab. UPGRADE has been shown to be safer when applied to the species and varieties listed in Table 4. However, due to the large number of genera, species and varieties of crabapple, it is impossible to test every one for tolerance to UPGRADE. The professional user should conduct small scale testing to insure plant safety prior to broadscale commercial use on plant genera and species not listed on this label.

Do not exceed 2.4 gallons product/crop acre/year or 8 applications/crop/year.
Do not exceed 600 gallons spray volume per acre for foliar applications.
Do not exceed 2 pints volume per square foot for drench and crown applications.

TABLE 1: Diseases Controlled: When used in accordance with the label directions, UPGRADE will provide control of the following diseases of ornamental plants.

Disease (Pathogen)	Use Rates and Specific Instructions (fluid ounces product per 100 gallons)
[1] CONIFER BLIGHTS Phomopsis Blight (Phomopsis juniperovora) Tip Blight (Sirococcus strobilinus)	1.9 – 7.7 fl oz every 7-28 days
[2] LEAF BLIGHTS/LEAF SPOTS Alternaria Leaf Spot (Alternaria spp.) Anthracnose (Colletotrichum spp., Elsinoe spp.)	1.9 – 7.7 fl oz every 7-28 days

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Author: emalone Subject: Cross-Out Date: 1/31/2014 3:38:47 PM

Author: emalone Subject: Highlight Date: 1/31/2014 3:38:55 PM

Author: emalone Subject: Sticky Note Date: 1/31/2014 3:39:55 PM
These are restrictions and cannot be under a Precautions header. Move this vital information to higher up in the application directions section.

Downy Mildew of Rose (Peronospora sparsa)	3.9 – 7.7 fl oz every 7-21 days during periods of active plant growth and prior to dormancy or severe infection.
Entomosporium Leaf Spot (Entomosporium mespili)	1.9 – 7.7 fl oz every 7-28 days
Iris Leaf Spot (Mycosphaerella macrospora)	3.9 – 7.7 fl oz every 7-28 days
Leaf spot (Cladosporium echinulatum)	1.9 – 7.7 fl oz every 7-28 days
Rose Blackspot (Diplocarpon rosea)	7.7-15.4 fl oz every 7-14 days. Under severe disease conditions or if disease is already present, UPGRADE may be tank mixed with other fungicides such as Protect, Legend, or 3336 for enhanced disease management. Do not exceed 46 fl oz/acre/application.
Myrothecium leaf spot (Myrothecium spp.) Downy Mildew of bedding plants (Peronospora spp.)	3.9-7.7 fl oz every 7-28 days
Scab (Venturia inaequalis)	**For crabapples only, see Table 4 for tolerant species. Do not apply to apple trees.** 1.9 – 7.7 fl oz every 10-28 days.
Marrsonina Leaf Spot (Marsonina spp.) Cercospora Leaf Spot (Cercospora sp.)	1.9 – 7.7 fl oz 10-28 days.
[3] POWDERY MILDEW Erysiphe pannosa, Erysiphe spp. Microsphaera azaleae Sphaerotheca pannosa	Preventative applications only. Do not make more than 2 sequential applications before rotating to another class of fungicide. 1.9 – 7.7 fl oz every 7-28 days.
[4] RUSTS Needle Rust (Melampsora occidentalis) Phragmidium spp. Pucciniaspp. Gymnosporagium spp.	1.9 – 7.7 fl oz every 7-28 days. Alternation with a DMI Class fungicide such as Torque can enhance disease management.
[5] FLOWER BLIGHTS Anthracnose (Collectotrichum spp., Elsinoe spp.)	1.9 – 7.7 fl oz every 7-28 days
Botrytis Blight (Botrytis cinerea)	For suppression only. 7.7-15.4 fl oz every 7-21 days. Do not exceed 46 fl oz/acre. Rotation or tank mixing with other fungicides such as Protect, Legend, Spectro, Affirm, or 3336 will enhance disease management.
[6] SHOOT/STEM DISEASES Aerial/Shoot Blight (Phytophthora spp.)	1.9-3.9 fl oz every 7-28 days
[7] SOILBORNE DISEASES (Directed Spray or Sprench) Rhizoctonia solani Sclerotium rolfsii Fusarium spp.	Apply as a directed spray or sprench to the soil surface and lower stem and crown area of the plant. 1.9 – 7.7 fl oz every 7-21 days.
[8] SOILBORNE DISEASES [Drench] Rhizoctonia solani Sclerotium rolfsii Fusarium spp.	0.39-1.7 fl oz [11-51 mL] Apply 1-2 pints of the solution per square foot surface area, every 7-28 days. See Ornamentals Section for additional drench directions.

PLANT SAFETY: NUP-8099 has been shown to be safe when applied to the ornamental plants listed in Tables 2 and 3. However, due to the large number of genera, species and varieties of ornamental and nursery plants, it is impossible to test every one for tolerance to UPGRADE. Neither the manufacturer nor

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Author: emalone Subject: Highlight Date: 2/5/2014 11:15:15 AM

Author: emalone Subject: Sticky Note Date: 2/5/2014 11:14:58 AM
The cited label has these use rates and timing differentiated.

Author: emalone Subject: Highlight Date: 2/5/2014 11:17:39 AM

Author: emalone Subject: Sticky Note Date: 2/5/2014 11:17:57 AM
The cited label has those two diseases listed at different timings.

Author: emalone Subject: Highlight Date: 2/5/2014 2:03:24 PM

Author: emalone Subject: Sticky Note Date: 2/5/2014 2:03:53 PM
Delete random parentheses

Author: emalone Subject: Highlight Date: 2/5/2014 2:03:29 PM

Author: emalone Subject: Highlight Date: 2/5/2014 2:03:32 PM

Author: emalone Subject: Highlight Date: 2/5/2014 2:06:06 PM

Author: emalone Subject: Highlight Date: 2/5/2014 2:09:52 PM

Author: emalone Subject: Sticky Note Date: 2/6/2014 9:41:35 AM
This application technique is not on the cited product label. Please remove.

the seller has determined whether or not UPGRADE can be used safely on genera, species, or varieties of ornamental and nursery plants not specified on this label. The professional user should conduct small scale testing to insure plant safety prior to broad scale commercial use on plant genera and species not listed in this label. In addition, do not tank mix UPGRADE with other fungicides, insecticides, herbicides, fertilizer, adjuvants, etc, unless local experience indicates that the tank mix is safe to ornamental plants.

Do not apply UPGRADE to certain apple, crabapple, or cherry trees due to possible phytotoxicity. Furthermore, do not use spray equipment that has applied UPGRADE for use in these sensitive crops due to possible phytotoxicity from residue remaining in the sprayer.

Tolerant Ornamental Plants: UPGRADE has been found to be safe when applied to the plants listed in Tables 2 and 3 when applied according to recommended application methods, rates, and timings.

TABLE 2; Tolerant Plants Listed by Botanical Name

BOTANICAL NAME	COMMON NAME	DISEASES
Abelia spp.	Abelia	2
Abies fraseri	Fraser fir	1,4
Abies procera	Noble Fir	1,4
Acer palmatum	Japanese maple	2
Acer saccharum	Sugar maple	2
Ageratum spp.	Floss-Flower	3,4
Ageratum spp.	Pussy's-Foot	3,4
Aglaonema spp.	Chinese evergreen	2,4
Ajuga reptans	Bugle, Bugleweed	3
Antirrhinum spp.	Snap-Dragon	2(DM),3,4
Aphelandra spp.	Zebra-Plant	2
Artemisia spp.	Mugwort, Sagebrush	2
Artemisia spp.	Wormwood	2
Aster spp.	Aster, Starwort	4
Aucuba japonica	Japanese aucuba, Japanese laurel	7
Begonia spp. (except Rieger begonia)	Begonia	3,7
Berberis thunbergii	Barberry	3,4
Betula nigra	River birch	3,4
Bougainvillea spp.	Bougainvillea	2
Brassala actinophylla	Rubber-tree, Umbrella-tree	2,7
Buddleia davidii	Buddleia, Butterfly-bush	2
Buxus sempervirens	Boxwood	2,7
Caladium spp.	Caladium	7
Camellia japonica	Camellia	2
Caryota urens	Sago Palm	2,7
Catharanthus roseus	Vinca	2
Ceanothus sanguineus	Wild lilac	3
Ceanothus spp.	Ceanothus, California lilac, Snowball	3
Cedrus atlantica	Atlas cedar	2,4
Cedrus spp.	White cedar	2,4
Cercis occidentalis	Western redbud	2
Chamaecyparis spp.	Cypress, Leyland cypress	1
Chamaecyparis pisifera	Sawara cypress	1
Chamaedora elegans	Parlor palm	7
Chrysanthemum spp.	Chrysanthemums	2, 7
Clethra alnifolia	Clethra, White alder	2
Cornus spp.	Dogwood, Pink dogwood, Flowering dogwood	2,3
Cornus florida		
Cortaderia selloana	Dogwood	2,3
Cotoneaster adpressus	Pampas grass	3
Cotoneaster horizontalis	Creeping Cotoneaster	7
Cyclamen spp.	Cotoneaster -- variegated rockspray	7
Cyperus spp.	Cyclamen	7

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Author: emalone Subject: Pencil Date: 2/6/2014 9:58:20 AM

Author: emalone Subject: Pencil Date: 2/6/2014 9:58:25 AM

Author: emalone Subject: Sticky Note Date: 2/6/2014 9:58:28 AM
Need to be shifted up one cell. Barberry should line up with Berberis

Author: emalone Subject: Highlight Date: 2/6/2014 9:57:41 AM

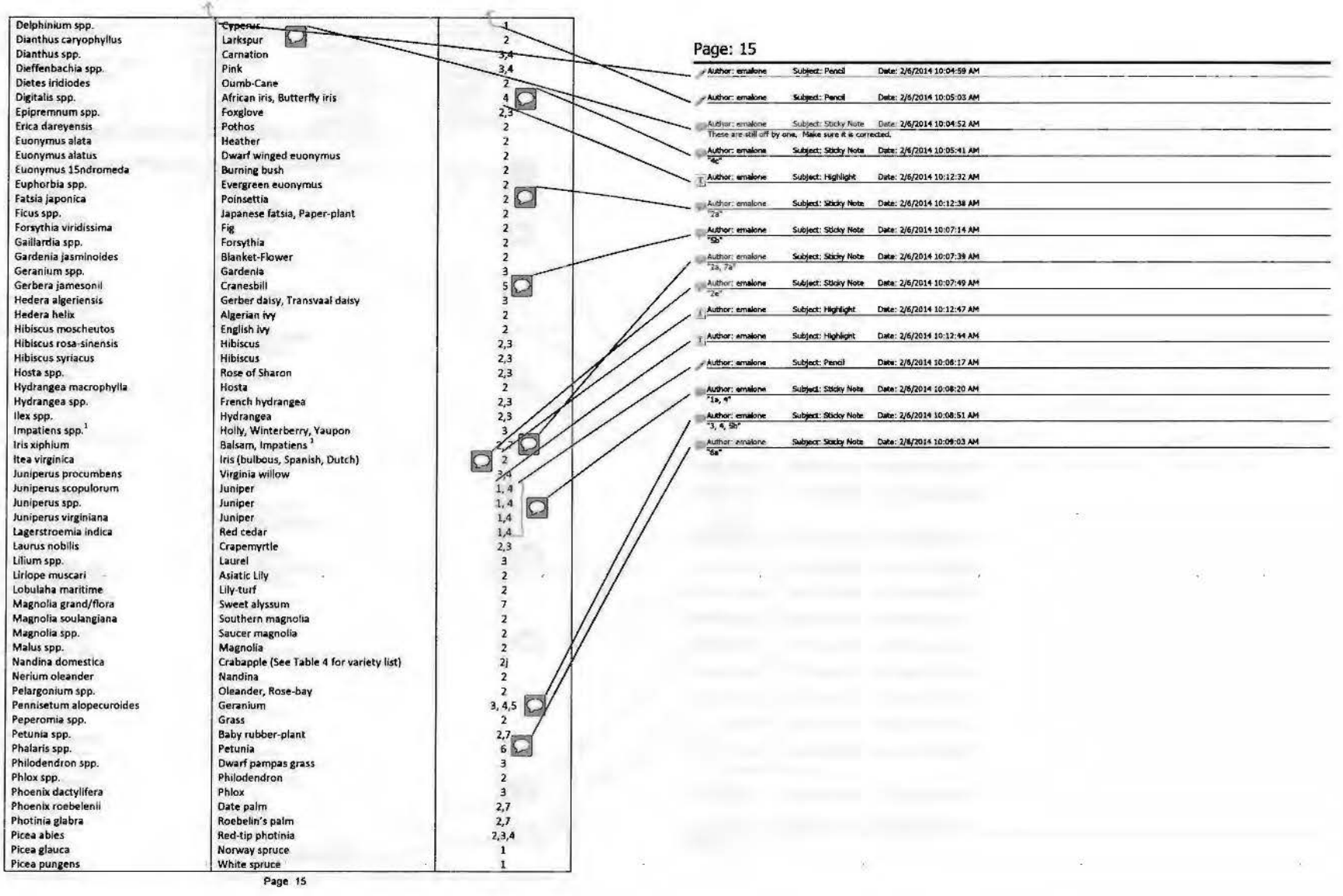
Author: emalone Subject: Highlight Date: 2/6/2014 9:58:06 AM

Author: emalone Subject: Sticky Note Date: 2/6/2014 10:03:32 AM
Cbad label lists disease as 7a, therefore only for Rhizoctonia solani. You need a way to decipher between the listed diseases in Table 1 like 100-1093 has.

Author: emalone Subject: Sticky Note Date: 2/6/2014 10:02:35 AM
"2, 7c"

Author: emalone Subject: Sticky Note Date: 2/6/2014 10:04:14 AM
"2b, 3" for both 2,3s here

Author: emalone Subject: Sticky Note Date: 2/6/2014 10:04:26 AM
"7c"



Delphinium spp.	Cypress	1
Dianthus caryophyllus	Larkspur	2
Dianthus spp.	Carnation	3,4
Dieffenbachia spp.	Pink	3,4
Dietes iridiodes	Oumb-Cane	2
Digitalis spp.	African iris, Butterfly iris	4
Epipremnum spp.	Foxglove	2,3
Erica dareyensis	Pothos	2
Euonymus alata	Heather	2
Euonymus alatus	Dwarf winged euonymus	2
Euonymus 15ndromeda	Burning bush	2
Euphorbia spp.	Evergreen euonymus	2
Fatsia japonica	Poinsettia	2
Ficus spp.	Japanese fatsia, Paper-plant	2
Forsythia viridissima	Fig	2
Gaillardia spp.	Forsythia	2
Gardenia jasminoides	Blanket-Flower	2
Geranium spp.	Gardenia	3
Gerbera jamesonii	Cranesbill	5
Hedera algeriensis	Gerber daisy, Transvaal daisy	3
Hedera helix	Algerian ivy	2
Hibiscus moscheutos	English ivy	2
Hibiscus rosa-sinensis	Hibiscus	2,3
Hibiscus syriacus	Hibiscus	2,3
Hosta spp.	Rose of Sharon	2,3
Hydrangea macrophylla	Hosta	2
Hydrangea spp.	French hydrangea	2,3
Ilex spp.	Hydrangea	2,3
Impatiens spp.[1]	Holly, Winterberry, Yaupon	3
Iris xiphium	Balsam, Impatiens [1]	2,3
Itea virginica	Iris (bulbous, Spanish, Dutch)	2
Juniperus procumbens	Virginia willow	3,4
Juniperus scopulorum	Juniper	1, 4
Juniperus spp.	Juniper	1, 4
Juniperus virginiana	Juniper	1,4
Lagerstroemia indica	Red cedar	1,4
Laurus nobilis	Crapemyrtle	2,3
Lilium spp.	Laurel	3
Lirlope muscari	Asiatic Lily	2
Lobulaha maritime	Lily-turf	2
Magnolia grand/flora	Sweet alyssum	7
Magnolia soulangiana	Southern magnolia	2
Magnolia spp.	Saucer magnolia	2
Malus spp.	Magnolia	2
Nandina domestica	Crabapple (See Table 4 for variety list)	2j
Nerium oleander	Nandina	2
Pelargonium spp.	Oleander, Rose-bay	2
Pennisetum alopecuroides	Geranium	3, 4,5
Peperomia spp.	Grass	2
Petunia spp.	Baby rubber-plant	2,7
Phalaris spp.	Petunia	6
Philodendron spp.	Dwarf pampas grass	3
Phlox spp.	Philodendron	2
Phoenix dactylifera	Phlox	3
Phoenix roebelenii	Date palm	2,7
Photinia glabra	Roebelin's palm	2,7
Picea abies	Red-tip photinia	2,3,4
Picea glauca	Norway spruce	1
Picea pungens	White spruce	1

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Author: emalone Subject: Pencil Date: 2/6/2014 10:04:59 AM

Author: emalone Subject: Pencil Date: 2/6/2014 10:05:03 AM

Author: emalone Subject: Sticky Note Date: 2/6/2014 10:04:52 AM
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Author: emalone Subject: Sticky Note Date: 2/6/2014 10:05:41 AM
"4c"

Author: emalone Subject: Highlight Date: 2/6/2014 10:12:32 AM

Author: emalone Subject: Sticky Note Date: 2/6/2014 10:12:38 AM
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"2a, 7a"

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Author: emalone Subject: Pencil Date: 2/6/2014 10:08:17 AM

Author: emalone Subject: Sticky Note Date: 2/6/2014 10:08:20 AM
"1a, 4"

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"3, 4, 5b"

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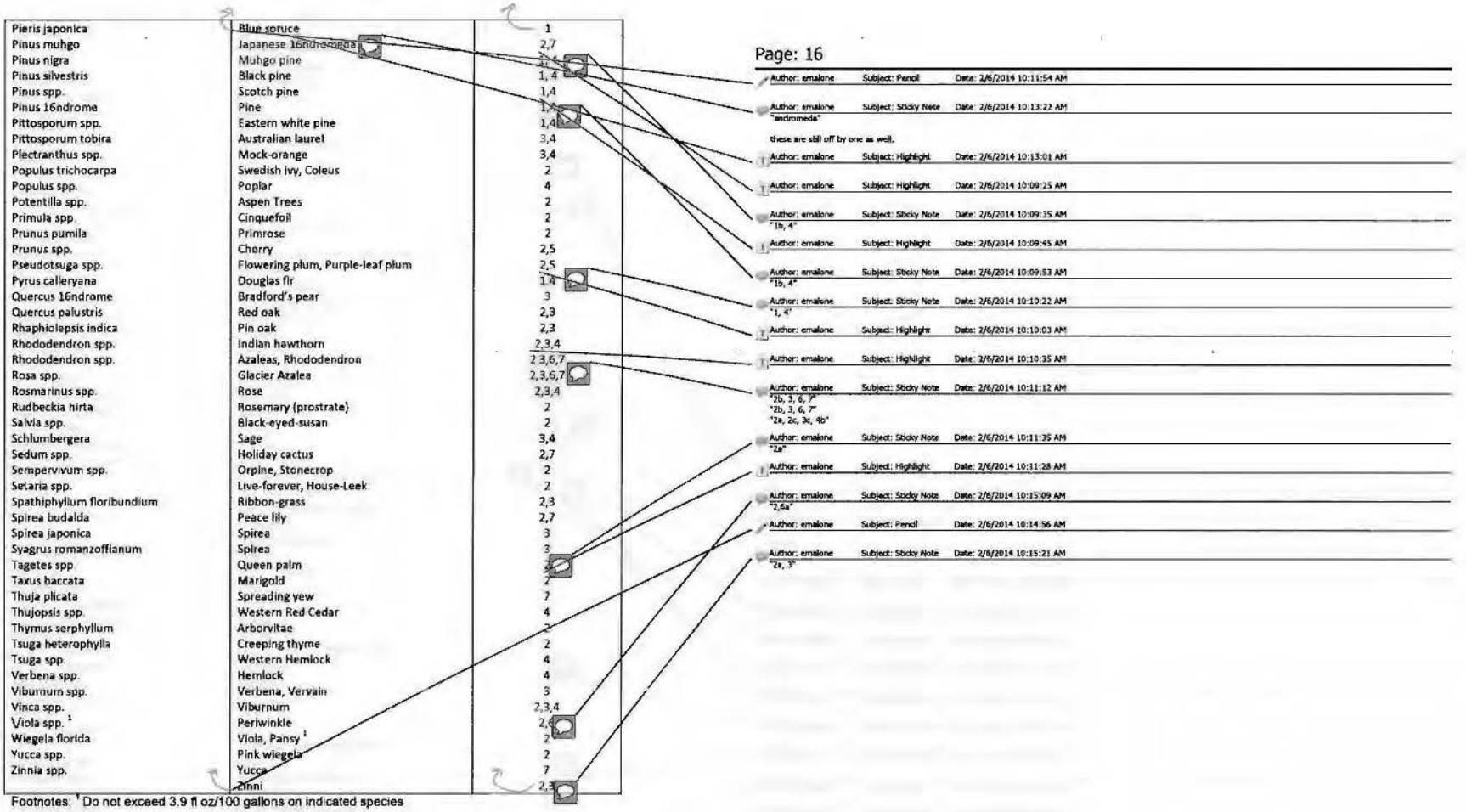

Pieris japonica	Blue spruce	1
Pinus muhgo	Japanese 16ndrodrupa	2,7
Pinus nigra	Muhgo pine	2, 4
Pinus silvestris	Black pine	1, 4
Pinus spp.	Scotch pine	1,4
Pinus 16ndrome	Pine	1,4
Pittosporum spp.	Eastern white pine	1,4
Pittosporum tobira	Australian laurel	3,4
Plectranthus spp.	Mock-orange	3,4
Populus trichocarpa	Swedish ivy, Coleus	2
Populus spp.	Poplar	4
Potentilla spp.	Aspen Trees	2
Primula spp.	Cinquefoil	2
Prunus pumila	Primrose	2
Prunus spp.	Cherry	2,5
Pseudotsuga spp.	Flowering plum, Purple-leaf plum	2,5
Pyrus calleryana	Douglas fir	1,4
Quercus 16ndrome	Bradford's pear	3
Quercus palustris	Red oak	2,3
Rhaphiolepsis indica	Pin oak	2,3
Rhododendron spp.	Indian hawthorn	2,3,4
Rhododendron spp.	Azaleas, Rhododendron	2,3,6,7
Rosa spp.	Glacier Azalea	2,3,6,7
Rosmarinus spp.	Rose	2,3,4
Rudbeckia hirta	Rosemary (prostrate)	2
Salvia spp.	Black-eyed-susan	2
Schlumbergera	Sage	3,4
Sedum spp.	Holiday cactus	2,7
Sempervivum spp.	Orpine, Stonecrop	2
Setaria spp.	Live-forever, House-Leek	2
Spathiphyllum floribundium	Ribbon-grass	2,3
Spirea budalda	Peace lily	2,7
Spirea japonica	Spirea	3
Syagrus romanzoffianum	Spirea	3
Tagetes spp.	Queen palm	2
Taxus baccata	Marigold	2
Thuja plicata	Spreading yew	7
Thujopsis spp.	Western Red Cedar	4
Thymus serphyllum	Arborvitae	2
Tsuga heterophylla	Creeping thyme	2
Tsuga spp.	Western Hemlock	4
Verbena spp.	Hemlock	4
Viburnum spp.	Verbena, Vervain	3
Vinca spp.	Viburnum	2,3,4
Viola spp. [1]	Periwinkle	2,6
Wiegela florida	Viola, Pansy [1]	2
Yucca spp.	Pink wiegela	2
Zinnia spp.	Yucca	7
	Zinni	2,3

Footnotes: [1] Do not exceed 3.9 fl oz/100 gallons on indicated species

TABLE 3: Tolerant Varieties of Crabapple and Other Malus Species

Arkansas Black	Eleyi	Mary Potter	*M. seiboldii*
M.atrosanguinea	Enterprise	Molten Lava	Selkirk
M. baccata	Evereste	New Centennial	Sentinel
M. baccata var. jackii	Eyelynn	Ormiston Roy	Silver Moon
M. baccata var. mandshurica	*M. floribunda*	Pink Satin	Silverdrift
Callaway	Gloriosa	Prairie Maid	Sinai Fire
Candymint Sargent	Golden Delicious	Prairifire	*M. spectablis*

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Author: emalone Subject: Pencil Date: 2/6/2014 10:11:54 AM

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Author: emalone Subject: Sticky Note Date: 2/6/2014 10:09:35 AM
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Author: emalone Subject: Sticky Note Date: 2/6/2014 10:09:53 AM
"1b, 4"

Author: emalone Subject: Sticky Note Date: 2/6/2014 10:10:22 AM
"1, 4"

Author: emalone Subject: Highlight Date: 2/6/2014 10:10:03 AM

Author: emalone Subject: Highlight Date: 2/6/2014 10:10:35 AM

Author: emalone Subject: Sticky Note Date: 2/6/2014 10:11:12 AM
"2b, 3, 6, 7"
"2b, 3, 6, 7"
"2a, 2c, 3c, 4b"

Author: emalone Subject: Sticky Note Date: 2/6/2014 10:11:35 AM
"2a"

Author: emalone Subject: Highlight Date: 2/6/2014 10:11:28 AM

Author: emalone Subject: Sticky Note Date: 2/6/2014 10:15:09 AM
"2,6a"

Author: emalone Subject: Pencil Date: 2/6/2014 10:14:56 AM

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"2a, 3"

Christmas Holly	Golden Raindrops	Profusion	Sugar Tyme
M. coronaria	Hopa	*M. pumila*	Van Eseltine
David	Indian Magic	Ralph Shay	White Angel
Dolgo	Island	Red Jade	Williams Pride
Donald Wyman	Katherine	Red Baron	Winter Gold
Dorothea	Lancelot	Sargent	Yellow Delicious
Doubloons	Louisa	*M. sargentii*	*M. zumi Calocarpa*

TABLE 4: Intolerant Plants – **Do Not Apply UPGRADE to these species or varieties.**

COMMON NAME	BOTANICAL NAME
Apple	*Malus domestica*
Crabapple - Flame variety	*Malus spp.*
Crabapple - Brandywine variety	*Malus spp.*
Crabapple - Novamac variety	*Malus spp.*
Cherry, Flowering - Yoshina variety	*Prunus yedoensis.*
Leatherleaf Fern	*Rumohra adianformis*
and Other Ferns for cut foliage	and other species for cut foliage
Privet	*Ligustrum spp.*

Conifers including Christmas Trees
UPGRADE may be used to control certain diseases on conifers in production (indoor and outdoor) and landscape situations. Please see the Ornamental Section above for more detailed directions for use in landscape situations.

Target Disease	Use Rate fluid ounces product/A (lb a.i/A)	Application Directions
Diplodia tip blight *(Diplodia pinea)* Lophodermium needlecast *(Lophodermium pinastri)* Swiss needlecast *(Phaeocrytopus gaumannii)*	6.2-15.4 (0.1-0.25)	Begin applications prior to disease development and continue throughout the season at 7-21-day intervals following the resistance management guidelines. Apply by ground, air, or chemigation. An adjuvant may be added at label specified rates. Do not make more than two (2) sequential applications of this product or other Group 11 fungicides before alternating with a fungicide that has a different mode of action.
Specific Use Restrictions: Do not exceed 1 gallon of this product/Acre per season.		

COMMERCIAL PRODUCTION ROSES

Target Disease	Use Rate fluid ounces product/A (lb a.i/A)	Application Directions
Downy Mildew *(Peronospora sparsa)* Powdery Mildew *(Spherotheca pannosa)* Rust *(Phragmidium mucronatum, P. tuberculatum, and other Phragmidium spp.* Septoria Leaf Spot	3.1-15.4 (0.05-0.25)	Heritage application should begin prior to disease development and continue throughout the season on 7-21 day intervals following the resistance management guidelines. Applications may be made by ground, air or chemigation. An adjuvant may be added at recommended rates.

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Author: emalone Subject: Sticky Note Date: 2/6/2014 2:08:33 PM
Add the following restriction language per the cited label:
"Do not make more than 4 sequential applications of Upgrade before alternating with a fungicide that is not in Group 11. Do not make more than 8 applications per acre per year."

(Septoria rosea) Alternaria Leaf Spot *(Alternaria alternata)*		
Specific Use Restrictions: Do not exceed 1 gallon of this product/Acre per season.		

BRASSICA - LEAFY GREENS Subgroup 5B

Broccoli Raab; Chinese Cabbage (bok choy); Collards; Kale; Mizuna; Mustard Greens; Mustard Spinach; Rape Greens; all Cultivars and/or Hybrids of these

Target Disease	Use Rate fl oz product/A (lb a.i/A)	Application Directions
Black spot *(Alternaria* spp.) Cercospora leaf spot *(Cercospora* spp.) White rust *(Albugo candida)*	6.0-15.5 (0.10-0.25)	Begin applications prior to disease development and continue throughout the season at 7- to 14-day intervals following the resistance management guidelines. Apply by ground, air, or chemigation. An adjuvant may be added at label specified rates. Do not make more than one application of this product or other Group 11 fungicides before alternating with a fungicide that has a different mode of action.
Soilborne Diseases Seedling Root Rot, Basal Stem Rot *(Rhizoctonia solani)*	0.40-0.80 fl oz/1000 row ft	For soilborne/seedling disease control, see directions and rates under **SOILBORNE/SEEDLING DISEASE CONTROL** section.
Use Limitations: Do not exceed 46 fl oz of this product/Acre per season. Do not exceed the equivalent of 0.75 lb a.i./Acre per season from any azoxystrobin-containing products. Pre-harvest Interval (PHI) = 0 Day.		

CUCURBIT VEGETABLES, Crop Group 9

Cantaloupe; Chayote; Chinese-Waxgourd; Cucumber; Gourds; Honeydew Melon; *Momordica* spp. (bitter melon, balsam apple); Muskmelon; Watermelon; Pumpkin; Squash; Zucchini; Varieties, Cultivars and/or Hybrids of these

Target Disease	Use Rate fl oz product/A (lb a.i/A)	Application Directions
Anthracnose *(Colletotrichum lagenarium)* Belly rot *(Rhizoctonia solani)* Downy mildew *(Pseudoperonospora cubensis)* Gummy stem blight *(Didymella bryoniae)* Leaf spots *(Alternaria* spp., *Cercospora* spp.) Myrothecium canker *(Myrothecium roridum)* Plectosporium blight *(Plectosporium tabacinum)* Powdery Mildew *(Sphaerotheca fuliginea), (Erysiphe cichoracearum)* Ulocladium Leaf Spot *(Ulocladium cucurbitae)*	6.0-15.5 (0.10-0.25)	For downy mildew and powdery mildew, make preventative applications at 5- to 7-day intervals. For belly rot control, make the first application at the 1-3 leaf crop stage with a second application just before vines tip over or 10-14 days later, whichever occurs first. For all other diseases, begin applications prior to disease development and continue throughout the season at 7- to 14-day intervals following the resistance management guidelines. Apply by ground, air, or chemigation. An adjuvant may be added at label specified rates. Do not tank mix this product with crop oil concentrates (COC), methylated spray oil (MSO) or silicon adjuvants. Do not tank mix this product with malathion, Kelthane®, Thiodan®, Phaser®, Lannate®, Lorsban®, M-Pede® or Botran®. Do not make more than one application of this product or other Group 11 fungicides before alternating with a fungicide that has a different mode of action. Do not make more than four (4) foliar applications of this product or other Group 11 fungicides per crop per acre per year.

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Soilborne diseases Rhizoctonia root rot *(Rhizoctonia solani)*	0.4-0.8 fl oz/1000 row ft	For soilborne/seedling disease control, see directions and rates under **SOILBORNE/SEEDLING DISEASE CONTROL** section.
Use Limitations: Do not exceed 92.3 fl oz of this product/Acre per season. Do not exceed the equivalent of 1.5 lb a.i./Acre per season from any azoxystrobin-containing products. Pre-harvest interval (PHI) = 1 Day.		

FRUITING VEGETABLES – PEPPER / EGGPLANT Subgroup 8-10B *

African Eggplant; Bell Pepper; Eggplant; Martynia; Nonbell Pepper; Okra; Pea Eggplant; Pepino; Roselle; Scarlet Eggplant; Cultivars, Varieties, and/or Hybrids of these

For use on tomatoes, see crop specific Application Directions for Tomato Subgroup 8-10A

Target Disease	Use Rate fl oz product/A (lb a.i/A)	Application Directions
Anthracnose *(Colletotrichum spp.)* Powdery Mildew *(Sphaerotheca spp.)*	6.0-15.5 (0.10-0.25)	Begin applications prior to disease development and continue throughout the season at 7- to 14-day intervals following the resistance management guidelines. Apply by ground, air, or chemigation. An adjuvant may be added at label specified rates. Do not make more than one application of this product or other Group 11 fungicides before alternating with a fungicide that has a different mode of action.
Soilborne diseases Rhizoctonia seedling rot *(Rhizoctonia solani)*	0.4-0.8 fl oz/1000 row ft	For soilborne/seedling disease control, see directions and rates under **SOILBORNE/SEEDLING DISEASE CONTROL** section.
Use Limitations: Do not exceed 61.5 fl oz of this product/Acre per season. Do not exceed the equivalent of 1.0 lb a.i./Acre per season from any azoxystrobin-containing products. Pre-harvest interval (PHI) = 0 Day.		

HERBS & SPICES (Except Black Pepper), Crop Group 19

Allspice; Angelica; Anise (seed); Anise (star); Annatto (seed); Balm; Basil; Borage; Burnet; Camomile; Caper (buds); caraway; Caraway (black); cardamom; Cassia Bark; Cassia Buds; Catnip; Celery Seed; Chervil (dried); Chinese Chive; Chive; Cinnamon; Clary; Clove Buds; Coriander Leaf (cilantro or Chinese parsley); Coriander Seed (cilantro); Costmary; Culantro (leaf); Culantro (seed); Cumin; Curry (leaf); Dill (dillweed); Dill (seed); Fennel (common); Florence Fennel (seed); Fenugreek; Grains of Paradise; Horehound; Hyssop; Juniper Berry; Lavender; Lemongrass; Lovage (leaf); Lovage (seed); Mace; Marigold; Marjoram; Mustard (seed); Nasturtium; Nutmeg; Parsley (dried); Pennyroyal; Pepper (black and white); Poppy (seed); Rosemary; Rue; Saffron; Sage; Savory (summer and winter); Sweet Bay; Tansy; Tarragon; Thyme; Vanilla; Wasabi, Wintergreen; Woodruff; Wormwood

Target Disease	Use Rate fl oz product/A (lb a.i/A)	Application Directions
Corynespora blight *(Corynespora cassiicola)* Dill blight *(Cercosporidium punctum)* Phoma blight *(Passalora puncta)*	6.0-15.5 (0.10-0.25)	Begin applications at the onset of disease development and continue throughout the season at 7-day intervals following the resistance management guidelines. Apply by ground only. An adjuvant may be added at label specified rates. Use a minimum of 30 gallons of water per acre. Do not make more than two (2) sequential applications of this product or other Group 11 fungicides before alternating with a fungicide that has a different mode of action.
Fusarium Rhizome and Root Rot *(Pythium spp.)*	6.2-15.4 (0.10-0.25)	<u>For Wasabi only</u> Begin applications at the onset of disease development and continue throughout the season at 7-day intervals following the resistance management guidelines. Apply by ground or chemigation. An adjuvant may be added at label specified rates. Use a minimum of 30 gallons of water per acre.

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Author: emalone Subject: Sticky Note Date: 1/22/2014 3:56:26 PM
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		Do not make more than two (2) sequential applications of this product or other Group 11 fungicides before alternating with a fungicide that has a different mode of action.

Use Limitations:
Do not exceed 92.3 fl oz of this product/Acre per season.
Do not exceed the equivalent of 1.5 lb a.i./Acre per season from any azoxystrobin-containing products.
Pre-harvest Interval (PHI) = 0 Day.

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Author: emalone Subject: Highlight Date: 1/22/2014 3:59:10 PM

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LEAFY VEGETABLES (Except Brassica)

Amaranth, Arugula, Cardoon, Celery, Celluce, Chervil, Chrysanthemum (edible), Coriander leaves (Cilantro), Corn salad, Cress, Dandelion, Dock, Endive, Fennel, Lettuce (head and leaf), Orach, Parsley, Purslane, Radicchio, Rhubarb, Spinach, Swiss Chard, Cultivars, Varieties, and/or Hybrids of these

Target Disease	Use Rate fl oz product/A (lb a.i/A)	Application Directions
Foliar Diseases Alternaria leaf spot *(Alternaria sonchi, A. spp.)* Anthracnose *(Microdochium panattonianum, Colletotrichum dematium)* Cercospora leaf spot *(Cercospora spp.)* Septoria leaf spot *(Septoria petroselini)* White rust *(Albugo occidentalis)*	6.0-15.5 (0.10-0.25)	For downy and powdery mildew, make preventative applications at 5- to 7-day intervals. For all other diseases, begin applications prior to disease development and continue throughout the season at 7- to 14-day intervals following the resistance management guidelines. Apply by ground, air, or chemigation. An adjuvant may be added at label specified rates. Do not make more than one application of this product or other Group 11 fungicides before alternating with a fungicide that has a different mode of action. **ATTENTION** Applications of this product to leafy vegetable foliage may contribute to foliar phytotoxicity under certain circumstances. Proceed with caution with regard to tank mixes and adjuvants when treating any leafy vegetable crops with this product. When treating leaf lettuce, do not tank mix this product with AMBUSH® WP, Pounce® WP, Ambette®, Warrior® with Zeon ™ Technology, or any other product that may increase the penetration of this product into the leaf surface such as, but not limited to, silicone wetters.
Downy mildew *(Bremia lactucae)* Powdery mildew *(Eyrisiphe cichoracearum)*	12.0-15.5 (0.20-0.25)	
Soilborne Diseases Web blight, Bottom rot, Crater rot, Root rot *(Rhizoctonia solani)*	0.4-0.8 fl oz/ 1000 row ft	For soilborne/seedling disease control, see directions and rates under **SOILBORNE/SEEDLING DISEASE CONTROL** section.

Use Limitations:
Do not exceed 92.3 fl oz of this product/Acre per season.
Do not exceed the equivalent of 1.5 lb a.i./Acre per season from any azoxystrobin-containing products.
Pre-harvest Interval (PHI) = 0 Day.

TOMATO Subgroup 8-10A

Bush Tomato; Cocona; Currant Tomato; Garden Huckleberry; Goji Berry; Groundcherry; Naranjilla; Sunberry; Tomatillo; Tomato; Tree Tomato; Cultivars, Varieties, and/or Hybrids of these

Target Disease	Use Rate fl oz product/A (lb a.i/A)	Application Directions
Anthracnose *(Colletotrichum coccodes)* Black mold *(Alternaria alternata)* Buckeye rot *(Phytophthora spp.)* Early blight *(Alternaria solani)* Powdery Mildew *(Oidiopsis sicula)* Septoria Leaf Spot *(Septoria lycopersici)* Target spot *(Corynespora cassiicola)*	5.0-6.2 (0.08-0.10)	Begin applications prior to disease development and continue throughout the season following the resistance management guidelines. Apply by ground, air, or chemigation. For late blight, apply this product at 5- to 7- day intervals. For all other tomato diseases, make applications at 7- to 21-day intervals. Use of adjuvants may result in severe phytotoxicity. Do not exceed 0.125% adjuvant (v/v). Tank mixtures with dimethoate may cause phytotoxicity. For fresh market tomatoes, do not use adjuvants or tank mix this product with other pesticides formulated as emulsifiable concentrates (EC). Do not make more than one application of this product or other Group 11 fungicides before alternating with a fungicide that has a different mode of action.
Late Blight *(Phytophthora infestans)*	6.2 (0.10)	

Use Limitations:
Do not exceed 37 fl oz of product/Acre per season.
Do not exceed the equivalent of 0.6 lb a.i./Acre per season from any azoxystrobin-containing product.
Pre-harvest Interval (PHI) = 0 Day.

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STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage and disposal.

PESTICIDE STORAGE Store in original containers only. Keep container closed when not in use. Do not store near food or feed. In case of spill on floor or paved surfaces, mop and remove to chemical waste storage area until proper disposal can be made if product cannot be used according to the label.

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative of the nearest EPA Regional Office for guidance.

CONTAINER HANDLING:

[Note to Reviewer: The following statement will be included on all Final Printed Labels bearing multiple Container Handling statements] **"NOTE:** This product is available in multiple containers. Refer to the Net Contents section of this product's labeling for the applicable "Nonrefillable" or "Refillable" designation. Follow the container handling instructions below that apply to your container type/size."

[Nonrefillable Containers 5 Gallons or Less]

Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. **Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke.

[Nonrefillable containers larger than 5 gallons]

Nonrefillable container. Do not reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure-rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

[Refillable containers larger than 5 gallons]

Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times

WARRANTY DISCLAIMER

The directions for use of this product must be followed carefully. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, (1) THE GOODS DELIVERED TO YOU ARE FURNISHED "AS IS" BY MANUFACTURER OR SELLER AND (2) MANUFACTURER AND SELLER MAKE NO WARRANTIES, GUARANTEES, OR REPRESENTATIONS OF ANY KIND TO BUYER OR USER, EITHER EXPRESS OR IMPLIED, OR BY USAGE OF TRADE, STATUTORY OR OTHERWISE, WITH REGARD TO THE PRODUCT SOLD, INCLUDING, BUT NOT LIMITED TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, USE, OR ELIGIBILITY OF THE PRODUCT FOR ANY PARTICULAR TRADE USAGE. UNINTENDED CONSEQUENCES, INCLUDING BUT NOT LIMITED TO INEFFECTIVENESS, MAY RESULT BECAUSE OF SUCH FACTORS AS THE PRESENCE OR ABSENCE OF OTHER MATERIALS USED IN COMBINATION WITH THE GOODS, OR THE MANNER OF USE OR APPLICATION, INCLUDING WEATHER, ALL OF WHICH ARE BEYOND THE CONTROL OF MANUFACTURER OR SELLER AND ASSUMED BY BUYER OR USER. THIS WRITING CONTAINS ALL OF THE REPRESENTATIONS AND AGREEMENTS BETWEEN BUYER, MANUFACTURER AND SELLER, AND NO PERSON OR AGENT OF MANUFACTURER OR SELLER HAS ANY AUTHORITY TO MAKE ANY REPRESENTATION OR WARRANTY OR AGREEMENT RELATING IN ANY WAY TO THESE GOODS.

LIMITATION OF LIABILITY

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, IN NO EVENT SHALL MANUFACTURER OR SELLER BE LIABLE FOR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, OR FOR DAMAGES IN THEIR NATURE OF PENALTIES RELATING TO THE GOODS SOLD, INCLUDING USE, APPLICATION, HANDLING, AND DISPOSAL. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, MANUFACTURER OR SELLER SHALL NOT BE LIABLE TO BUYER OR USER BY WAY OF INDEMNIFICATION TO BUYER OR TO CUSTOMERS OF BUYER, IF ANY, OR FOR ANY DAMAGES OR SUMS OF MONEY, CLAIMS OR DEMANDS WHATSOEVER, RESULTING FROM OR BY REASON OF, OR RISING OUT OF THE MISUSE, OR FAILURE TO FOLLOW LABEL WARNINGS OR INSTRUCTIONS FOR USE, OF THE GOODS SOLD BY MANUFACTURER OR SELLER TO BUYER. ALL SUCH RISKS SHALL BE ASSUMED BY THE BUYER, USER, OR ITS CUSTOMERS. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BUYER'S OR USER'S EXCLUSIVE REMEDY, AND MANUFACTURER'S OR SELLER'S TOTAL LIABILITY SHALL BE FOR DAMAGES NOT EXCEEDING THE COST OF THE PRODUCT.

If you do not agree with or do not accept any of the directions for use, the warranty disclaimers, or limitations of liability, do not use the product and return it unopened to the Seller, and the purchase price will be refunded.

(RV092513)

All trademarks that appear on this label which are not owned by Nufarm Americas Inc. or its subsidiaries are the property of their respective owners.

This page contains no comments

LABEL HISTORY

NOT TO BE PART OF THE PRINTED LABEL
For Regulatory Use Only

File Name	Revision Mark	Comment
000228-00XXX.20130925.draft	RV092513	Application for registration of a new end-use product – PRIA Action Category R310

This page contains no comments

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION
OFFICE OF PESTICIDE PROGRAMS REGISTRATION DIVISION (7505P)

DP BARCODE No.: 416526; **FILE SYMBOL No.**: 228-TEU; **PRODUCT NAME**: UPGRADE Fungicide; **DECISION No.**:483695; **PC Code(s)**: 128810; **ACTION CODE**: R300; **FOOD Use**: Yes

DATE OUT: December 17, 2013

SUBJECT: End Use Product Chemistry Review
Product Name: Upgrade Fungicide

FROM: Shyam Mathur
Product Chemistry Team Leader
Technical Review Branch/RD (7505P)

S Bmathur 12-17-13 Jcl

TO: Erin Malone / Shaja Joyner, RM 20
Fungicide Branch / RD (7505P)

Company Name: Nufarm Americas Incorporation
Formulation Type: Fungicide – Suspension concentrate (SC)

INTRODUCTION:

The registrant has submitted an application for the registration of the new end use product "Upgrade Fungicide". The registrant has submitted a CSF for basic formulation (dated September 23, 2013). On the advice of the Agency, the registrant has submitted the revised basic CSF (dated December 17, 2013). In support of the registration application, the registrant has submitted 830 series group A and group B product chemistry data with MRID Nos. 491071-01 to 491071-07. The registrant has claimed that the proposed product is substantially similar to the registered product with Reg. No. 228.720 TRB has been asked to determine the acceptability of the proposed basic CSF, the supporting product chemistry data and also determine similarity to the cited product.

SUMMARY OF FINDINGS:

1. Name of Active Ingredient(s): Azoxystrobin (22.9%)

2. Has the registrant claimed substantial similarity to a registered product?

   [X] Yes; [ ] No; [ ] NA; if yes, give the registration number of the cited product.

   Reg. No. 228.720

3. All of the source materials of the active ingredient are derived from registered sources: [X] Yes [ ] No

4. All inert ingredients have been screened by IIAB and found to be approved for the proposed labeled Uses: [X] Yes; [ ] No

5. Confidential Statement of Formula(s):

   [X] Proposed Basic - Dated: 09-23-2013; Re-submitted – Dated: 12-17-2013

   [ ] Proposed Alternate CSF – Both Dated: ; Re-submitted – Dated: NA

   Alternate CSF(s) complies with 40CFR§152.43: [ ] Yes; [ ] No; [X] NA

6. Product label

   a. Ingredient statement: Nominal concentration of AI listed on CSF(s) concurs with product label (PR Notice 91-2).
   [X] Yes; [ ] No; if not, explain below:

   Is the sub statement in compliance with PR Notice 97-6 (inert ingredient vs other ingredient)
   [X] Yes; [ ] No; if not, explain below:

Metallic equivalent:	[ ] Yes	[X] NA
Soluble arsenic:	[ ] Yes	[X] NA
Isomeric ratios:	[ ] Yes	[X] NA
Acid Equivalent:	[ ] Yes	[X] NA

   b. Health related sub statements: Product contains?

Petroleum distillate at > 10%:	[ ] Yes	[ ] No	[X] NA
Methanol at > 4%:	[ ] Yes	[ ] No	[X] NA
Sodium nitrate/Sodium Nitrite	[ ] Yes	[ ] No	[X] NA

   c. Physical chemical hazard statement: Product label requires a statement per 40 CFR §156.78 for flammability, explosive potential or electric insulator breakdown?
   [ ] Yes; [X] No

   Is the sub statement in compliance with PR Notice 98-6 (Total Release Fogger)?
   [ ] Yes; [ ] No; [X] NA; if not, explain below

   d. Label requires an additional Storage and Disposal statement:
   [ ] Yes; [X] No; if yes explain below:

7. Group **A**: Product Chemistry Data

TRB's determination of the acceptability for the proposed product is listed in the tables below.

Guideline No.	Study Title		Data submitted		TRB's Assessment of Data	MRID Nos.
			Yes	No		
830.1550	Product Identity & Composition		X		A	491071-01
830.1600	Description of materials used to produce the product		X		A	491071-01
830.1650	Description of formulation process		X		A	491071-01
830.1670	Discussion on the formation of impurities		X		A	491071-01
830.1700	Preliminary analysis				NA	
830.1750	Certified limits (158.350)	Standard certified limits	X		A	Revised basic CSF dated 12-17-2013
		Proposed Limits				
		Justification for wider limits				
830.1800	Enforcement analytical method		X		A	491071-02

A = Acceptance, N = Not Acceptable, G = Data Gap, W = Waiver Request, I = In Progress, NA = Not Applicable; U = Upgradeable.

8. Group **B:**

Guideline No.	Study Title	Value or Qualitative Description	TRB's Assessment of Data	MRID Nos.
830.6302	Physical State	Liquid 20-25°C	A	491071-03
830.6314	Oxidation/reduction	Compatible with water, kerosene, monoammonium phosphate and Zn dust. But was non-compatible (highly reactive) with potassium permanganate	A	491071-04
830.6315	Flammability	NA	A	" " "
830.6316	Explodability	NA	A	" " "
830.7000	pH	7.52 @20°C	A	491071-05
830.7100	Viscosity	251.4 cP (mPa.s) @20°C 198.3 cP (mPa.s) @40°C	A	491071-06
830.7300	Relative Density	1.068 @ 20 °C	A	491071-07

A = Acceptance, N = Not Acceptable, G = Data Gap, W = Waiver request, NA = Not applicable, I = In progress; U = Upgradeable.

CONCLUSIONS:

The TRB has reviewed the product chemistry data submitted for the proposed end-use product and has concluded that:

1. The proposed revised basic CSF (dated 12-17-2013) is acceptable.

2. The data submitted corresponding to guidelines 830.1550 (product identity & composition), 830.1600 (description of materials used to produce product), 830.1650 (description of formulation process), 830.1670 (description of formation of impurities), 830.1750 (certified limits) and 830.1800 (enforcement analytical method) are acceptable.

3. The product chemistry data submitted corresponding to guidelines 830.6302 (color), 830.6303 (physical state), 830.6304 (odor), 830.6314 (oxidation/reduction), 830.7000 (pH), 830.7100 (viscosity) and 830.7300 (density) are acceptable.

4. The proposed product with File Symbol No. 228-TEU was determined to be substantially similar to the cited product with Reg. No. 228-720 from the product chemistry point of view.

5. Since the product was determined to be non-compatible with potassium permanganate, the registrant is advised to add the following warning on the product label under Physical-Chemical Hazards:

"Do not mix or allow coming in contact with oxidizing agent. Hazardous Chemical reaction may occur"

Decision #: 483695
DP #: (416526)
PRIA
Parent DP #:
Submission #: 941787
E-Sub #:

DATA PACKAGE BEAN SHEET

Date: 06-Dec-2013

* * * Registration Information * * *

Registration: 228-TEU - UPGRADE FUNGICIDE

Company: 228 - NUFARM AMERICAS, INC.

Risk Manager: RM 20 - Shaja Joyner - (703) 308-3194 Room# PY1 S-7327

Risk Manager Reviewer: Erin Malone EMALONE

Sent Date: PRIA Due Date: 18-Feb-2014 Edited Due Date:

Type of Registration: Product Registration - Section 3

Action Desc: (R300) NEW PRODUCT;OR SIMILAR COMBINATION PRODUCT (ALREADY REGISTERED)

Ingredients: 128810, Azoxystrobin(22.9%)

* * * Data Package Information * * *

Expedite: ○ Yes ● No Date Sent: 06-Dec-2013 Due Back:

DP Ingredient: 128810, Azoxystrobin

DP Title: Product Chem Review for new Azoxy EP

CSF Included: ● Yes ○ No Label Included: ● Yes ○ No Parent DP #:

	Assigned To	Date In	Date Out	
Organization:	RD / TRB			Last Possible Science Due Date: 04-Jan-2014 ✓
Team Name:	CHEM			Science Due Date:
Reviewer Name:	Shyam Mathur	12/15/13	12/18/13	Sub Data Package Due Date:
Contractor Name:				

* * * Studies Sent for Review * * *

Printed on Page 2

* * * Additional Data Package for this Decision * * *

Can be printed on its own page

* * * Data Package Instructions * * *

Chem team:

I have for your review an R300 that is stating to be similar to 228-720. It is an azoxystrobin EP that lists uses for turf, ornamentals, as well as crops. The cited product label is for post harvest disease control on bananas and citrus. The letter does not cite another label for these uses, so that is the first problem with this application. Secondly, the cited studies are the product chemistry studies that were submitted for 228-720. The nominals concentrations line up, but these products must be identical in composition for this to be acceptable. Do you find that the proposed product is indeed chemically similar to 228-720? Are the cited studies sufficient? Is the proposed basic CSF dated 9/23/13 acceptable?

For your review I have included the letter, transmittal, proposed basic csf, formulator's exemption, certification with respect to citation of data, data matrix, and proposed label.
The application package came to me after the technical screen due date, but as we already have some potential issues could you complete a technical screen ASAP?

Thanks,
Erin

DP#: (416526) *** Studies Sent for Review *** Decision#: (483695)

MRID	MRID Status	Citation Reference	Guideline	86-5 Status
49107101		Byrne, T. (2013) NUP-08099: Product Chemistry. Project Number: RTP/10/005/REG/OCR. Unpublished study prepared by Nufarm Americas, Inc. 99p.	830.1550/Product Identity and composition	Pass (08-Aug-2013)
49107101		Byrne, T. (2013) NUP-08099: Product Chemistry. Project Number: RTP/10/005/REG/OCR. Unpublished study prepared by Nufarm Americas, Inc. 99p.	830.1600/Description of materials used to produce the product	Pass (08-Aug-2013)
49107101		Byrne, T. (2013) NUP-08099: Product Chemistry. Project Number: RTP/10/005/REG/OCR. Unpublished study prepared by Nufarm Americas, Inc. 99p.	830.1650/Description of formulation process	Pass (08-Aug-2013)
49107101		Byrne, T. (2013) NUP-08099: Product Chemistry. Project Number: RTP/10/005/REG/OCR. Unpublished study prepared by Nufarm Americas, Inc. 99p.	830.1670/Discussion of formation of impurities	Pass (08-Aug-2013)
49107101		Byrne, T. (2013) NUP-08099: Product Chemistry. Project Number: RTP/10/005/REG/OCR. Unpublished study prepared by Nufarm Americas, Inc. 99p.	830.1700/Preliminary analysis	Pass (08-Aug-2013)
49107101		Byrne, T. (2013) NUP-08099: Product Chemistry. Project Number: RTP/10/005/REG/OCR. Unpublished study prepared by Nufarm Americas, Inc. 99p.	830.1750/Certified limits	Pass (08-Aug-2013)
49107101		Byrne, T. (2013) NUP-08099: Product Chemistry. Project Number: RTP/10/005/REG/OCR. Unpublished study prepared by Nufarm Americas, Inc. 99p.	830.1800/Enforcement analytical method	Pass (08-Aug-2013)
49107102		Parmar, J. (2008) Validation of Analytical Method for Active Ingredient Analysis of NUP-08099 by HPLC. Project Number: 8339/OCR. Unpublished study prepared by Jai Research Foundation. 59p.	830.1800/Enforcement analytical method	Pass (08-Aug-2013)
49107103		Desai, H. (2008) Appearance (Colour, Physical State and Odour) of NUP-08099. Project Number: 8331/OCR. Unpublished study prepared by Jai Research Foundation. 22p.	830.6302/Color	Pass (08-Aug-2013)
49107103		Desai, H. (2008) Appearance (Colour, Physical State and Odour) of NUP-08099. Project Number: 8331/OCR. Unpublished study prepared by Jai Research Foundation. 22p.	830.6303/Physical state	Pass (08-Aug-2013)
49107103		Desai, H. (2008) Appearance (Colour, Physical State and Odour) of NUP-08099. Project Number: 8331/OCR. Unpublished study prepared by Jai Research Foundation. 22p.	830.6304/Odor	Pass (08-Aug-2013)
49107104		Vohra, H. (2008) Oxidation / Reduction Properties of NUP-08099. Project Number: 8335/OCR. Unpublished study prepared by Jai Research Foundation. 25p.	830.6314/Oxidizing or reducing action	Pass (08-Aug-2013)

Similarity Clinic Screen Completed

Date: 11/14/13

Jacket #: 228-TEM

Actions Done:

Acute Toxicity Review: COMPLETED - IN JACKET
Acute Toxicity Language for Label: IN THE REVIEW

Product Chemistry Review: NEW PC STUDIES SUBMITTED
SEND TO TRB FOR FULL REVIEW

Transfer This Jacket To:

PM 20

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
CHEMICAL SAFETY AND
POLLUTION PREVENTION

SIMILARITY CLINIC MEMORANDUM:

Subject: EPA Reg. No.: 228-TEU/UPGRADE™ Fungicide
DP Barcode: 415957
PC Code: 128810

From: Maria Rivera Piansay, Chemist
Product Chemistry Team
Risk Management and Implementation Branch V
Pesticide Re-evaluation Division (7508P)

11/14/13

To: Driss Benmhend, PM 20
Fungicide Branch
Registration Division (7505P)

Applicant: Nufarm Americas, Inc.
11901 S. Austin Avenue
Alsip, IL 60803

FORMULATION FROM EPA Reg. No. 228-TEU LABEL:

	% by wt.
Active Ingredient(s):	
Azoxystrobin	22.9%
Inert Ingredient(s):	77.1%
Total	
100.0%	

BACKGROUND:

The registrant is claiming substantial-similarity to EPA Reg. No. 228-720 to support the registration of their new product, EPA Reg. No. 228-TEU. The studies conducted on EPA Reg. No. 228-720 were reviewed and found to be acceptable by RSB/RD on 2/24/91

The test material used in the studies was EPA Reg. No. 100-1098. In a review by TRB/RD on 6/25/13, EPA Reg. No. 228-720, was found to be substantially-similar to EPA Reg. No. 100-1098, which was transferred from EPA Reg. No. 10182-415.

After reviewing the studies, the CSF's, and the product tested in the studies, the subject product will be assigned the following toxicity categories: acute oral (81-1) – IV; acute dermal (81-2) – III; acute inhalation (81-3) – IV; primary eye (81-4) – IV; primary skin (81-5) – IV, and will be classified as a non sensitizer.

RECOMMENDATIONS:

- The subject product is substantially similar to EPA Reg. No. 228-720 and will be assigned the toxicity categories listed above.
- The subject product will also be classified as a non sensitizer.

The acute toxicity profile for EPA Reg. No. 228-TEU is currently:

Acute Oral	IV	Cited
Acute Dermal	III	Cited
Acute Inhalation	IV	Cited
Primary Eye	IV	Cited
Primary Dermal	IV	Cited
Skin sensitization	non sensitizer	Cited

NOTE: The acute toxicity requirements have been satisfied for the subject product.

LABELING:

ID #: 000228-TEU UPGRADE™ FUNGICIDE

SIGNAL WORD: CAUTION

HAZARDS TO HUMANS AND DOMESTIC ANIMALS:

Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing. Wear long-sleeved shirt and long pants, socks, shoes, and chemical resistant gloves (such as or made out of any waterproof material, Selection Category A).

FIRST AID:

IF ON SKIN: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-800-xxx-xxxx for emergency medical treatment information.

USER SAFETY RECOMMENDATIONS:

User should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

User should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

21-Day Screen Completed by Contractor

21-Day Expires on 10-17-13

Jacket # 228-TEU

MRID# _____

Content Screen: Recommend to **Pass**/Fail

11-3 Review: Pass/Fail/**NA**

Overall Status: Recommend to **Pass**/Fail

Transfer This Jacket to:

STEPHEN SCHAIBLE

20

PRIA 3 – 21 Day Content Screen Review Worksheet

(EPA/OPP Use Only)

September 2012

21 Day Screen Start Date: 9/26/13

Experts In-Processing Signature: MP Date 10/17/13 Fee Paid: Yes __

Division management contacted on issues No_____Yes _____Date _____

EPA Reg. Number: 228-TEU	EPA Receipt Date: 9/26/13

	Items for Review			Yes	No	N/A*
1	**Application Form** (EPA Form 8570-1) signed & complete including package type			X		
2	**Confidential Statement of Formula** all boxes completed, form signed, and dated (EPA Form 8570-4)			X		
	a) All inerts, including fragrances, approved for the proposed uses (see Footnote A)	**yes** X	**no**			
3	**Certification with Respect to Citation of Data** (EPA Form 8570-34) completed and signed (N/A if 100% repack)			X		
	Certificate and data matrix consistent			X		
	If applicant is relying on data that are compensable, is the offer to pay statement included. (see Footnote B)	**yes**	**no**			
	If applicable, is there a letter of Authorization for exclusive use only.					
4	**Formulator's Exemption Statement** (EPA Form 8570-27) completed and signed (N/A if source is unregistered or applicant owns the technical)			X		
5	**Data Matrix** (EPA Form 8570-35) both internal and external copies (PR 98-5) completed and signed (N/A if 100% repack)			X		
	a) Selective Method (Fee category experts use)	**yes** X	**no**			
	b) Cite-All (Fee category experts use)					
	c) Applicant owns all data (Fee category experts use)					
6	**5 Copies of Label (Electronic labels on CD are encouraged and guidance is available)**			X		
7	**Is the data package consistent with PR Notice 86-5**					+
8	**Notice of Filing included with petitions**					X

9	**If applicable for conventional applications, <u>reduced risk rationale</u>**			X
	<u>Required Data</u> and/or data waivers. See Footnote C.			
10	a) List study (or studies) not included with application			

Comments: No studies. Pass

Inerts Approved for Food Use under 40 CFR 180. 920, Pre-Harvest Application to Growing Crops.

TO

* N/A – Not Applicable

Footnotes

A. During the 21 day initial content review, all CSFs will be reviewed to determine whether all inerts listed, including fragrances, are approved for the proposed uses or have an application pending with the Agency. If an unapproved inert with no application pending with the Agency is identified, the applicant must either 1) resolve the inert issue by, for example, removing the inert, substituting it with an approved inert, submitting documentation that EPA approved the inert for the proposed pesticidal uses, correcting mistakes on the CSF, etc. or 2) provide the data to support OPP approval of the inert or 3) withdraw the application. Removing or substituting an inert ingredient will require a new CSF and may require submission of data. All information, forms, data and documentation resolving the inert issue must have been received by the Agency or the application withdrawn within the 21 day period, otherwise, the Agency will reject the application as described below.

To successfully complete this aspect of the 21 day initial content screen, applicants are **strongly encouraged** to verify that all inert ingredients have been approved for the application's uses or have an application pending with the Agency **even if a product is currently registered** by consulting the inert Web site and if the inert is not approved nor has an application pending with the Agency, to **obtain the necessary inert approval prior to submitting an application to register a pesticide product containing that inert ingredient.** Some inert ingredients are no longer approved for food uses or certain types of uses. The name and/or CAS number on a CSF must match the name and CAS number on this web site. Simple typographical errors in the name or CAS number have resulted in processing delays.

If an inert is not listed on the inert ingredient web site and the applicant believes that the inert has been approved, the applicant should contact the Inert Ingredient Assessment Branch (IIAB) at inertsbranch@epa.gov and resolve the issue. Copies of the correspondence with IIAB resolving the issue should accompany the application. All new inerts except PIP inerts are reviewed by IIAB. The IIAB should also be contacted for any questions on what supporting data needs to be submitted for and the Agency's inert review process. Questions on PIP inerts should be directed to the Chief of Microbial Pesticides Branch.

When a brand, trade, or proprietary name of an inert ingredient is listed on a CSF, additional information such as an alternate name of the inert, CAS number or other information must also be included to enable the Agency to determine if it has been approved. Each component of an inert mixture (including a fragrance) must be identified. In some cases, the supplier of the mixture or fragrance may need to provide this information to the Agency. Prior to the Agency's receipt of an application, applicants must arrange with a proprietary mixture or fragrance supplier to provide the component information to the Agency or promptly upon EPA's request. If the inert ingredients in a proprietary blend (including fragrances) cannot or are not identified or provided within the 21-day content review period, the Agency will reject the application.

During the 21 day content review, applicants should submit information to the individual identified by the Agency when the applicant is informed of an unapproved inert.

Unapproved Inerts Identified on CSFs

All applications except conventional new products and PIPs

Once an unapproved inert is identified on a CSF, the Agency will contact the applicant with the following options:

1. Correct the application by, for instance, correcting the inert's identity or CAS number, providing documentation that the inert has been approved, or removing the unapproved inert from the CSF or replacing it with one that is approved for the application's uses; or

2. Provide the required information necessary to identify an inert approval application that is pending with the Agency; or

3. Submit the information and data needed for the Agency to approve the unapproved inert. If this option is selected and implemented, the Agency may request an extension in the PRIA decision review timeframe to accommodate the inert review/approval process;

4. Withdraw the application (the Agency retains 25% of the full fee for the fee category estimated); or

If none of these options is selected and implemented by the applicant within the 21 day content review period, the Agency will reject the application and retain 25% of the full fee of the category identified.

Conventional New Product Applications

When the Registration Division identifies an unapproved inert on a CSF with an application for a new product that the applicant has not identified as requiring an inert approval (R300 or R301), it will contact the applicant with the following options:

1. Correct the application by, for instance, correcting the inert's identity or CAS number, providing documentation that the inert has been approved, or removing the unapproved inert from the CSF or replacing it with one that is approved for the application's uses; or

2. Submit the information and data needed for the Agency to approve the unapproved inert, including any required petition to establish or amend a tolerance or exemption from a tolerance. (This option may change the PRIA category for the application, which could require a longer decision review time and a larger fee. If additional fees are due, they must be received by the Agency within the 21 day content review period.)

3. Withdraw the application (the Agency retains 25% of the full fee for the fee category estimated); or

If none of the above options is selected and implemented during the 21-day content-review period, the Agency will reject the application and retain 25% of the appropriate fee for the new product-inert approval category.

PIP Applications

When the Biopesticide and Pollution Prevention Division identifies an unapproved inert on a PIP CSF and a request to approve the inert does not accompany the application, it will contact the applicant with the following options:

1. Correct the application by, for instance, correcting the spelling or name of the inert to that in 40 CFR 174, or providing documentation that the inert has been approved; or

2. Submit the information and data needed for the Agency to approve the unapproved inert. If an inert ingredient tolerance exemption petition is required, the petition must be received by the Agency and the B903 fee paid within the 21 day period. If this option is selected and implemented, the Agency will discuss harmonizing the timeframe for both actions.

3. Withdraw the application (the Agency retains 25% of the full fee for the fee category estimated); or

If none of the above options is selected and implemented during the 21 day content review period, the Agency will reject the application and retain 25% of the fee.

B. A policy on documentation of offers to pay is still being developed, however, for a me-too or fast track (similar/identical) new product, R300 or A530, an application without the necessary authorizations of offers to pay will be placed into either R301 or A531. The Agency recommends that authorizations of offers to pay be submitted with other PRIA applications to avoid delays in the Agency's decision.

C. Biopesticide applicants are advised to contact the Agency and discuss study waivers prior to submitting their application to the Agency. Documentation of such discussions should be submitted with the study waiver.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

September 30, 2013

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

OPP Decision Number: D-483695
EPA File Symbol or Registration Number: 228-TEU
Product Name: UPGRADE FUNGICIDE
EPA Receipt Date: 26-Sep-2013
EPA Company Number: 228
Company Name: NUFARM AMERICAS, INC.

CARRIE M. TACKEMA
NUFARM AMERICAS, INC.
4020 AERIAL CENTER PKWY., STE. 101
MORRISVILLE, NC 27560-

SUBJECT: Receipt of Registration Application Subject to Registration Service Fee

Dear Registrant:

The Office of Pesticide Programs has received your application and certification of payment. If you submitted data with this application, the results of the PRN-2011-3 screen will be communicated separately. During the administrative screen, the Office of Pesticide Programs has determined that this Action is subject to a Pesticide Registration Service Fee as defined in the Pesticide Registration Improvement Act.

The Action has been identified as Action Code R300:
NEW PRODUCT;OR SIMILAR COMBINATION PRODUCT (ALREADY REGISTERED) TO AN IDENTICAL OR SUBSTANTIALLY SIMILAR IN COMPOSITION AND USE TO A REGISTERED PRODUCT;REGISTERED SOURCE OF ACTIVE INGREDIENT;NO DATA REVIEW ON ACUTE TOXICITY, EFFICACY OR CRP - ONLY PRODUCT CHEMISTRY DATA;CITE-ALL DATA CITATION, OR SELECTIVE DATA CITATION WHERE APPLICANT OWNS ALL REQUIRED DATA, OR APPLICANT SUBMITS SPECIFIC AUTHORIZATION LETTER FROM DATA OWNER;CATEGORY ALSO INCLUDES 100% RE-PACKAGE OF REGISTERED END-USE OR MANUFACTURING-USE PRODUCT THAT REQUIRES NO DATA SUBMISSION NOR DATA MATRIX;

The fee for action code R300 is $1,434. Payment in the amount of $1,720 was made for this action. A refund in the amount of $286 will be sent to you when this action is completed unless it is reclassified.

If you have any questions, please contact the Pesticide Registration Service Fee Ombudsman at (703) 308-9362.

Sincerely,

Front End Processing Staff
Information Technology & Resources Management Division

Fee for Service

{941787V~

This package includes the following

- ◉ New Registration
- ○ Amendment

☐ Studies? ☐ Fee Waiver?

☐ volpay % Reduction: ___

for Division

- ○ AD
- ○ BPPD
- ◉ RD

Risk Mgr. 20

Receipt No. S-	941787
EPA File Symbol/Reg. No.	228-TEU
Pin-Punch Date:	9/26/2013

☐ This item is NOT subject to FFS action.

Action Code:

Requested: R301

Granted: R300

Amount Due: $ 1434.00

Parent/Child Decisions:

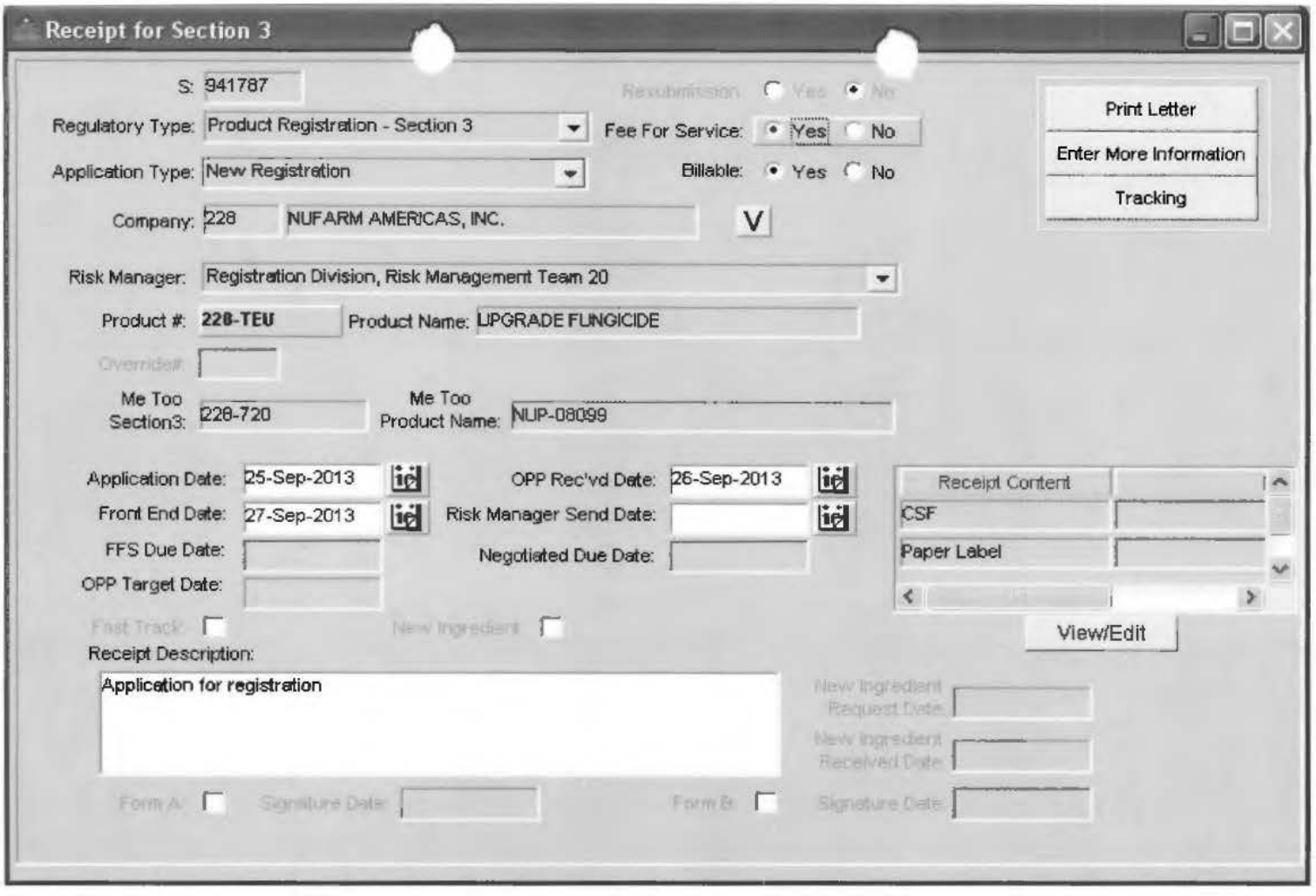
☐ Inert Cleared for Intended Use ☐ Uncleared Inert in Product

Reviewer: KM 10/1/13 Date: 9/30/13

Remarks:

~~submitted~~ Citing own product chem. data
Cite-all for tox + generic

Needs sim clinic -


Receipt for Section 3
S: 941787
Resubmission: Yes No
Regulatory Type: Product Registration - Section 3
Fee For Service: Yes No
Application Type: New Registration
Billable: Yes No
Company: 228 NUFARM AMERICAS, INC.
Print Letter
Enter More Information
Tracking
Risk Manager: Registration Division, Risk Management Team 20
Product #: 228-TEU
Product Name: UPGRADE FUNGICIDE
Override#:
Me Too Section3: 228-720
Me Too Product Name: NUP-08099
Application Date: 25-Sep-2013
OPP Rec'vd Date: 26-Sep-2013
Front End Date: 27-Sep-2013
Risk Manager Send Date:
FFS Due Date:
Negotiated Due Date:
OPP Target Date:
Receipt Content
CSF
Paper Label
Fast Track:
New Ingredient:
View/Edit
Receipt Description:
Application for registration
New Ingredient Request Date:
New Ingredient Received Date:
Form A:
Signature Date:
Form B:
Signature Date:

Pay.gov Payment Confirmation: PRIA Service Fees

paygovadmin to: carrie.tackema@us.nufarm.com 09/25/2013 09:05 AM

Your payment has been submitted to Pay.gov and the details are below. If you have any questions or you wish to cancel this payment, please contact Pay.gov Customer Service by phone at (800) 624-1373 or by email at pay.gov.clev@clev.frb.org.

Application Name: PRIA Service Fees
Pay.gov Tracking ID: 25CGKOR3
Agency Tracking ID: 74508297060
Transaction Type: Sale
Transaction Date: Sep 25, 2013 9:05:49 AM

Account Holder Name: Carrie Tackema
Transaction Amount: $1,720.00
Billing Address: 3638 Armida Drive
City: Wake Forest
State/Province: NC
Zip/Postal Code: 27587
Country: USA
Card Type: AmericanExpress
Card Number: **********1008

Decision Number:
Registration Number:
Company Name: Nufarm Americas
Company Number: 228
Action Code: R301-45

THIS IS AN AUTOMATED MESSAGE. PLEASE DO NOT REPLY.

EPA

United States
Environmental Protection Agency
Washington, DC 20460

☒ **Registration**
☐ **Amendment**
☐ **Other:**

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number	2. EPA Product Manager	3. Proposed Classification
228-_ _ _ (not yet assigned)	**Shaja Joyner**	☒ None ☐ Restricted
4. Company/Product (Name) **UPGRADE Fungicide**	PM# **20**	
5. Name and Address of Applicant *(Include ZIP Code)* **Nufarm Americas Inc. 11901 S. Austin Avenue Alsip, IL 60803** ***Please send all correspondence to "contact point" listed below***	6. **Expedited Review.** In accordance with FIFRA Section 3(c)(3) (b)(I), my product is similar or identical in composition and labeling to: EPA Reg. No.: 228-720 Product Name: NUP-08099	

Section - II

☐ Amendment – Explain below.
☐ Resubmission in response to Agency letter dated _____
☐ Notification - Explain below.
☐ Final printed labels in response to Agency letter dated _____
☒ "Me Too" Application
☐ Other - Explain below

Explanation: Use additional page(s) if necessary. (For Section I and Section II.)

Application for Registration
PRIA CATEGORY: R310-45

CONTACT INFORMATION: Carrie M. Tackema
(919) 467-5923 fax; carrie.tackema@us.nufarm.com

Section - III

1. Material This Product Will Be Packaged In:

Child-Resistant Packaging	Unit Packaging	Water Soluble Packaging	2. Type of Container
☐ Yes* ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Metal ☒ Plastic ☐ Glass ☐ Paper ☐ Other (Specifiy)
***Certification must be submitted**	If "Yes" Unit Packaging wgt. / No. per container	If "Yes" Package wgt. / No. per container	

3. Location of Net Contents Information	4. Size(s) Retail Container	5. Location of Label Directions
☒ Label ☐ Container	**1 Qt - Bulk**	☒ On Label ☐ On labeling accompanying product

6. Manner in Which Label is Affixed to Product ☐ Lithograph ☒ Paper glued ☐ Stenciled ☐ Other _____

Section - IV

1. Contact Point *(Complete items directly below for identification of individual to be contacted, if necessary, to process this application)*

Name	Title	Telephone No. (Include Area Code)
Carrie M. Tackema	**Regulatory Manager**	**919-379-2528**

Certification

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

6. Date Application Received **(Stamped)**

2. Signature	3. Title	
	Regulatory Manager	
4. Typed Name **Carrie M. Tackema**	4. Date **September 25, 2013**	

Nufarm

+1 919.379.2510
+1 919.467.5923
4020 Aerial Center Parkway, Suite 101
Morrisville, NC 27560
www.nufarm.com

Via Courier Delivery

September 25, 2013

Ms. Shaja Joyner, PM#20
Document Processing Desk (REGFEE)
Office of Pesticide Programs (7504P)
U. S. Environmental Protection Agency
Room S-4900, One Potomac Yard
2777 S. Crystal Drive
Arlington, VA 22202-4501

Contains Confidential Business Information

RE: Application for Pesticide Registration – PRIA 301-45
UPGRADE Fungicide
EPA Reg. No. 228-[not yet assigned]

Dear Ms. Joyner:

Nufarm Americas, Inc. is submitting an application to register a new end use product (UPGRADE Fungicide) via E-submission. UPGRADE Fungicide is substantially similar in use to an already registered product (NUP-08099, EPA Reg. No. 228-720).
Nufarm has determined that this action falls under PRIA Category R301-45. We have pre-paid the service fee for this action and provide the following records of payment:

Pay.gov Tracking ID: 25CGKOR3
Agency Tracking ID: 74508297060

In support of this E-submission action, please find enclosed:

- Application for Pesticide Registration (8570-1);
- Certification with Respect to Citation of Data (8570-34);
- Data Matrix- Agency & Public Use Copies (8570-35);
- Confidential Statement of Formula (8570-4);
- Proposed Label- 5 hard copies & 1 CD containing an electronic copy in pdf format;
- Certification with Respect to Label Integrity for electronic copy of label; and

Vol. No.	OPPTS No.	EPA GLN	Study References	MRID No.
1	N/A	N/A	**Administrative Documents**	492200-00

Please contact me at directly at (919) 379-2528 or by email at carrie.tackema@us.nufarm.com if you have any questions regarding this action.

Sincerely,

Carrie M. Tackema
Regulatory Manager

Enclosure(s)

Nufarm Americas, Inc.
4020 Aerial Center Parkway
Suite 101
Morrisville, NC 27560

Vol. No.	OPPTS No.	EPA GLN	Study References	MRID No.
1	N/A	N/A	**Administrative Documents**	492200-00

Product ingredient source information may be entitled to confidential treatment

Form approved. OMB NO. 2070-0060. Approval Expires 1-30-93

United States Environmental Protection Agency
Washington, D.C. 20460

EPA

Formulator's Exemption Statement

(40 CFR 152.85)

Applicant's Name and Address	EPA File Symbol/Registration Number
Nufarm Americas Inc. 4020 Aerial Center Parkway, Suite 101 Morrisville, NC 27560	228-XXX
	Product Name UPGRADE Fungicide
	Date of Confidential Statement of Formula (EPA Form 8570-4) September 23, 2013

As an authorized representative of the applicant for registration of the product identified above, I here certify that:

(1) This product contains the following active ingredient(s):

AZOXYSTROBIN

(2) Of these, each active ingredient listed in paragraph (4) is present solely as the result of the use of that active ingredient in the manufacturing, formulation or repackaging of another product which contains that active ingredient, which is registered under FIFRA Section 3, is purchased by us from another producer, and is labeled for at least each use for which my product is proposed to be labeled.

(3) Indicate by checking (A) or (B) below which paragraph applies:

☒ (A) An accurate Confidential Statement of Formula *(EPA Form 8570-4)* for the above identified product is attached to this statement. That formula statement indicates, by company name, registration number, and product name, the source of the active ingredient(s) listed in paragraph (1).

OR

☐ (B) The Confidential Statement of Formula *(CSF) (EPA Form 8570-4)* referenced above and on file with the EPA is complete, current, and accurate and contains the information required on the current CSF.

(4) The following active ingredients in this product qualify for the formulator's exemption.

	Source	
Active Ingredient	**Product Name**	**Registration Number**
Azoxystrobin	[redacted]	[redacted]

Signature	Name and Title	Date
	Carrie M. Tackema Regulatory Manager	September 25, 2013

EPA Form 8570-27 (Rev. 7-91) White - EPA copy Yellow - Applicant copy

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

Certification with Respect to Citation of Data

Applicant's/Registrant's Name, Address and Telephone Number	EPA Registration Number/ File Symbol
Nufarm Americas, Inc. **11901 S. Austin Avenue** **Alsip, IL 60803**	**228-IEU**
Active Ingredient(s) and/or representative test compound(s): **Azoxystrobin (PC code 128810)**	Date **September 25, 2013**
General use pattern(s) (list all those claimed for this product using 40 CFR Part 158) **Non-crop; Turfgrass**	Product Name **UPGRADE Fungicide**

NOTE: If your product is a 100% repackaging of another purchased EPA-registered product labeled for all the same uses on your label, you do not need to submit this form. You must submit the Formulator's Exemption Statement (EPA Form 8570-27).

☐ I am responding to a Data Call-In Notice, and have included with this form a list of companies sent offers of compensation (the Data Matrix form should be used for this purpose).

SECTION I: METHOD OF DATA SUPPORT (Check one method only)

☐ I am using the cite-all method of support, and have included with this form a list of companies sent offers of compensation (the Data Matrix form should be used for this purpose).	☒ I am using the selective method of support (or cite-all option under the selective method), and have included with this form a completed list of data requirements (the Data Matrix form must be used).

SECTION II: GENERAL OFFER TO PAY

[Required if using the cite-all method or when using the cite-all option under the selective method to satisfy one or more data requirements]

☒ I hereby offer and agree to pay compensation, to other persons, with regard to the approval of this application, to the extent required by FIFRA.

SECTION III: CERTIFICATION

I certify that this application for registration, this form for reregistration, or this Data Call-In Notice is supported by all data submitted or cited in the application for registration, the form for reregistration, or this Data Call-In response. In addition, if cite-all option under the selective method is indicated in Section I, this application is supported by all data in the Agency's files that (1) concern the properties or effects of this product or an identical or substantially similar product, or one or more of the ingredients in this product; and (2) is a type of data that would be required to be submitted under the data requirements in effect on the date of approval of this application if the application sought the initial registration of a product of identical or similar composition and uses.

I certify that for each exclusive use study cited in support of this registration or reregistration, that I am the original submitter or that I have obtained the written permission of the original submitter to cite that study.

I certify that for each study cited in support of this registration or reregistration that is not an exclusive use study, either: (a) I am the original data submitter; (b) I have obtained the written permission of the original data submitter to use this study in support of this application; (c) all periods of eligibility for compensation have expired for the study; (d) the study is in the public literature; or (e) I have notified in writing the company that submitted the study and have offered (i) to pay compensation to the extent required by sections 3(c)(1)(F) and/or 3(c)(2)(B) of FIFRA; and (ii) to commence negotiations to determine the amount and terms of compensation, if any, to be paid for the use of the study.

I certify that in all instances where an offer of compensation is required, copies of all offers to pay compensation and evidence of their delivery in accordance with sections 3(c)(1)(F) and/or 3(c)(2)(B) of FIFRA are available and will be submitted to the Agency upon request. Should I fail to produce such evidence to the Agency upon request, I understand that the Agency may initiate action to deny, cancel or suspend the registration of my product in conformity with FIFRA.

I certify that the statements I have made on this form and all attachments to it are true, accurate and complete. I acknowledge that any knowingly false or misleading statements may be punishable by fine or imprisonment or both under applicable law.

Signature	Date	Typed or Printed Name and Title
	September 25, 2013	**Carrie M. Tackema, Regulatory Manager**

EPA Form 8570-34 (9-97) Electronic and Paper versions available. Submit only Paper version.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

Form Approved OMB No. 2070-0060

Paperwork Reduction Act Notice: The public reporting burden for this collection of information is estimated to average 0.25 hours per response for registration activities and 0.25 hours per response for reregistration and special review activities, including time for reading the instructions and completing the necessary forms. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to: Director, OPPE Information Management Division (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460. Do not send the form to this address.

DATA MATRIX

Date September 23, 2013	**EPA Reg. No./File Symbol:** 228-XXX TEU	Page 1 of 5
Applicant's/Registrant's Name & Address: **Nufarm Americas Inc.** **4020 Aerial Center Parkway, Suite 101** **Morrisville, NC 27560**	**Product Name:** **UPGRADE Fungicide**	

Ingredient(s): **Azoxystrobin (PC Code 128810)**

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter (Company No.)	Status	Note
	PRODUCT CHEMISTRY DATA REQUIREMENTS				
830.1550	Product Identity and Composition	49107101 ✓	228	OWN	
830.1600	Description of the Materials Used to Produce the Product	49107101 ✓	228	OWN	
830.1620	Description of the Production Process	N/A			1
830.1650	Description of the Formulation Process	49107101 ✓	228	OWN	
830.1670	Discussion of the Formation of Impurities	49107101 ✓	228	OWN	
830.1700	Preliminary Analysis	NA			2
830.1750	Certified Limits	49107101 ✓	228	OWN	
830.1800	Enforcement Analytical Method	49107101 49107102 ✓	228	OWN	
830.6302	Color	49107103 ✓	228	OWN	
830.6303	Physical State	49107103	228	OWN	
830.6304	Odor	49107103	228	OWN	
830.6313	Stability to normal / elevated temperatures, metals and metal ions	N/A			3
830.6314	Oxidizing/Reducing Reaction	49107104 ✓	228	OWN	
830.6315	Flammability	N/A			5

Signature	**Name and Title:** Carrie M. Tackema Regulatory Manager	**Date** September 23, 2013

EPA Form 8570-35 (9-97) Electronic and Paper versions available. Submit only Paper version.

Agency Internal Use Copy

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

Form Approved OMB No. 2070-0060

DATA MATRIX

Date September 23, 2013	**EPA Reg. No./File Symbol:** 228-XXX	Page 2 of 5
Applicant's/Registrant's Name & Address: **Nufarm Americas Inc.** **4020 Aerial Center Parkway, Suite 101** **Morrisville, NC 27560**	**Product Name:** **UPGRADE Fungicide**	

Ingredient(s): **Azoxystrobin (PC Code 128810)**

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter (Company No.)	Status	Note
830.6316	Explodability	N/A			6
830.6317	Storage Stability	--			10
830.6319	Miscibility	N/A			7
830.6320	Corrosion Characteristics	--			10
830.6321	Dielectric Breakdown Voltage	N/A			8
830.7000	pH	49107105 ✓	228	OWN	
830.7050	UV/Visible Absorption	N/A			3
830.7100	Viscosity	49107106 ✓	228	OWN	
830.7200	Melting Point	N/A			3
830.7220	Boiling Point	N/A			3
830.7300	Density, Bulk Density, Specific Gravity	49107107 ✓	228	OWN	
830.7370	Dissociation Constant	N/A			3
830.7520	Particle Size	N/A			9
830.7550 830.7560 830.7570	Partition Coefficient (n-octanol/water)	N/A			3

Signature	Name and Title:	Date
	Carrie M. Tackema Regulatory Manager	September 23, 2013

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

Form Approved OMB No. 2070-0060

DATA MATRIX

Date September 23, 2013	**EPA Reg. No./File Symbol**: 228-XXX	Page 3 of 5
Applicant's/Registrant's Name & Address: **Nufarm Americas Inc.** **4020 Aerial Center Parkway, Suite 101** **Morrisville, NC 27560**	**Product Name**: **UPGRADE Fungicide**	

Ingredient(s): **Azoxystrobin (PC Code 128810)**

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter (Company No.)	Status	Note
830.7840 830.7860	Water Solubility	N/A			3
830.7950	Vapor Pressure	N/A			3

FOOTNOTES

1. The Description of the Production Process (830.1620) is not applicable to an end-use product [40 CFR §158.310(f)(3)]. See 830.1650 for formulation process information.
2. Preliminary Analysis (830.1670) data are not required since this product does not consist solely of the technical grade active ingredient (TGAI) and is not produced by an integrated manufacturing process [40 CFR §158.310(f)(10)].
3. Guidelines 830.6302, 830.6304, 830.6313, 830.7050, 830.7200, 830.7220, 830.7370, 830.7550, 830.7560, 830.7570, 7840, 830.7860, and 830.7950 – These data are not required since the product is an end use product [40 CFR §158.310 (e)].
4. Oxidizing/Reducing Reaction (830.6314) – requirement not applicable because product does not contain oxidizing or reducing agents [40 CFR §158.310(f)(13)]
5. Flammability (830.6315) data are not required since the product does not contain combustible liquids [40 CFR §158.310(f)(14)].
6. Explodability (830.6316) data are not required since the product is a water based solution and does not have explosive characteristics [40 CFR §158.310(f)(15)].
7. Miscibility (830.6319) data are not required since the product is not an emulsifiable liquid for dilution with petroleum solvents [40 CFR §158.310(f)(16)].
8. Dielectric Breakdown Voltage (830.6321) data are not required since the product is not for use around electrical equipment [40 CFR §158.310(f)(17)].
9. Particle size, fiber length, and diameter distribution (830.7520) - Data requirement not applicable since the product is not a water insoluble and/or fibrous substance [40 CFR §158.310(f)(23)].
10. Storage Stability (830.6317) and Corrosion Characteristics (830.6320) – studies to be submitted upon completion.

Signature	**Name and Title:** Carrie M. Tackema Regulatory Manager	**Date** September 23, 2013

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

Form Approved OMB No. 2070-0060

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DATA MATRIX

Date September 23, 2013	**EPA Reg. No./File Symbol:** 228-XXX	Page 4 of 5
Applicant's/Registrant's Name & Address: **Nufarm Americas Inc.** **4020 Aerial Center Parkway, Suite 101** **Morrisville, NC 27560**	**Product Name:** **UPGRADE Fungicide**	

Ingredient(s): **Azoxystrobin (PC Code 128810)**

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter (Company No.)	Status	Note
	ACUTE TOXICITY DATA REQUIREMENTS				
870.1100 / 81-1	Acute Oral Toxicity (RAT)	Cite-All		PAY	†
870.1200 / 81-2	Acute Dermal Toxicity	Cite-All		PAY	†
870.1300 / 81-3	Acute Inhalation Toxicity	Cite-All		PAY	†
870.2400 / 81-4	Primary Eye Irritation	Cite-All		PAY	†
870.2500 / 81-5	Primary Skin Irritation	Cite-All		PAY	†
870.2600 / 81-6	Skin Sensitization	Cite-All		PAY	†
	GENERIC DATA REQUIREMENTS			FORM	
	† Offers-to-pay are sent to the following registrants listed on EPA's April 8, 2013, Data Submitters List:	(100) SYNGENTA CROP PROTECTION, LLC		PAY	
		(7501) GUSTAFSON LLC		PAY	
		(34704) LOVELAND PRODUCTS, INC		PAY	
		(61842) TESSENDERLO KERLEY, INC		PAY	
		(66222) MAKHTESHIM AGAN OF NORTH AMERICA, INC		PAY	
		(66607) SPRAY DRIFT TASK FORCE		PER	††
		(71754) OUTDOOR RESIDENTIAL EXPOSURE TASK FORCE		PER	††
		(71755) AGRICULTURAL REENTRY TASK FORCE		PER	††

Signature	**Name and Title:** Carrie M. Tackema Regulatory Manager	**Date** September 23, 2013

EPA Form 8570-35 (9-97) Electronic and Paper versions available. Submit only Paper version.

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Form Approved OMB No. 2070-0060

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DATA MATRIX

Date	EPA Reg. No./File Symbol:	Page
September 23, 2013	228-XXX	Page 5 of 5

Applicant's/Registrant's Name & Address:

Nufarm Americas Inc.
4020 Aerial Center Parkway, Suite 101
Morrisville, NC 27560

Product Name:

UPGRADE Fungicide

Ingredient(s): **Azoxystrobin (PC Code 128810)**

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter (Company No.)	Status	Note
		(73989) FIFRA ENDANGERED SPECIES TASK FORCE		PER	††
		(75234) AGRICULTURAL HANDLERS EXPOSURE TASK FORCE		PER	††
	†† Nufarm Limited is a member of this Task Force.				

Signature	Name and Title:	Date
	Carrie M. Tackema Regulatory Manager	September 23, 2013

EPA Form 8570-35 (9-97) Electronic and Paper versions available. Submit only Paper version.

Agency Internal Use Copy

R 300 and 301

100% identical (repack): YES or NO (circle one)
{If **yes**, it's a 100% repack - then product chemistry, acute toxicity and efficacy data are not required}

Data on Group A and B must be submitted - Group A and B can not be cited.

Guideline No.	Group A: Product Chemistry Data Study Title	Data submitted	
		Yes	No
830.1550	Product Identity & Composition	✓	
830.1600	Description of materials used to produce the product	✓	
830.1650	Description of formulation process	✓	
830.1670	Discussion on the formation of impurities	✓	
830.1700	Preliminary analysis NA		✓
830.1750	Certified limits (158.345)	✓	
830.1800	Enforcement analytical method	✓	

Guideline No.	Group B: Product Chemistry Data Study Title	Data submitted	
		Yes	No
830.6302	Color	✓	
830.6303	Physical State	✓	
830.6304	Odor	✓	
830.6314	Oxidation/Reduction (Chemical incompatibility)	✓	
830.6315	Flammability NA		✓
830.6316	Explodability NA		✓
830.6317	Storage stability In progress		
830.6319	Miscibility NA		✓
830.6320	Corrosion Characteristics In progress		✓
830.6321	Dielectric Breakdown voltage NA		✓
830.7000	pH	✓	
830.7100	Viscosity	✓	
830.7300	Density	✓	

R 300 and 301

New products must provide a bridging rationale document. The bridging document directs OPP to use a currently registered set of 6 acute toxicity data and label; instead of submitting product specific data.

Guideline No.	Acute toxicity (6 pack) Study Title	Cited	
		Yes	No
870.1100	Acute Oral (LD50)	✓	
870.1200	Acute Dermal (LD50)	✓	
870.1300	Acute Inhalation (LC50)	✓	
870.2400	Acute Eye Irritation	✓	
870.2500	Acute Dermal Irritation	✓	
870.2600	Dermal Sensitization	✓	

Efficacy – which guideline depends on the proposed label use and they must cite the data to be used for the bridging rationale.

not required

Guideline No.	Efficacy Study Titles	Cited		Comments
		Yes	No	
810.3100	Soil Treatments for Imported Fire Ants			
810.3200	Livestock, Poultry, Fur and Wool-Bearing Animal Treatments			
810.3300	Treatments to Control Pests of Humans and Pets			
810.3400	Mosquito, Black Fly, and Biting Midge (Sand Fly) Treatments			
810.3500	Premises Treatments			
810.3600	Structural Treatments			
810.3800	Methods for Efficacy Testing of Termite Baits			

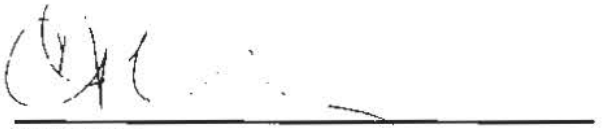
Certification with Respect to Label Integrity

version: 9/11/02

I certify that the information (including, but not limited to, text, tables, and graphics) contained in the electronic file identified below by file name and submitted with this certification is the same information as that on the paper copies of these documents included with this submission.

PROPOSED LABEL		
EPA Registration #	**Date Submitted to EPA**	**Electronic file name**
00223-___	September 25, 2013	000228-00XXX.20130925.UPGRADE fungicide

I certify that the statements that I have made on this form are true, accurate, and complete. I acknowledge that any knowingly false or misleading statements may be punishable by fine or imprisonment or both under applicable law.



Signature

September 25, 2013
Date

Carrie M. Tackema
Name (typed)

Regulatory Manager
Title

There is an **ELECTRONIC LABEL** for this action

You can use Acrobat to compare the e-label to the previous version (and find the changes). You can also use Acrobat to mark-up the e-label with your comments.

If e-label was submitted via

CD-ROM with paper application

then you will find e-label in

Electronic Label Library

If the e-label is not found in the ELL then it was probably not named correctly and could not be entered into the ELL. However, the file can be retrieved from the CD which is retained by the Front End.

or

If e-label was submitted via

XML E-Submission (no paper)

then you will find e-label in

Documentum

See overview of processing e-labels on other side of this sheet.
If you have any questions on e-labels, please contact one of your division e-label experts:

AD	Willie Abney	308-1689
	Renae Whitaker	308-7003
	Tracy Lantz	308-6415
BPPD		
RD	Tom Harris	308-9423

PROCESSING ELECTRONIC LABELS

(rev. 1/5/09, tch)

If e-label submitted via XML e-submission (not on CD-ROM), you may wish to find e-label in Documentum, save e-label to "My Documents", add e-label to ELL, start below at step 5.

Initial E-Label per application (on CD-ROM with paper via ITRMD)

1 ITRMD receives paper submission w/ e-label on CD

2 Tracking record added to OPPIN

3 ITRMD adds e-label to ELL

4 ITRMD sends paper submission to AD/BPPD/RD

5 Connect ELL record with OPPIN S#

in-process

6 Save copy of e-label from ELL to My Documents

7 Review label
(if acceptable, skip to step 20)

8 Add comments to e-label
(save; add "with comments" to filename

9 Print annotated e-label
(use "Print with Filename")

review

10 Send annotated e-label to registrant via email
(also send "How To Print")

11 File print of annotated e-label and email in jacket

12 Add annotated e-label to ELL

13 Close submission in OPPIN

out-process

Resubmission (via email to staffer or PM)

14 Receive email submission w/ e-label attached

15 Add tracking record to OPPIN

16 Add e-label to ELL

17 Connect ELL record with OPPIN S#

in-process

18 Save copy of e-labels (old & new) from ELL to My Documents

19 Compare old and new labels with Acrobat

(if revisions needed repeat steps 8-19)

review

20 Print e-label, stamp, write cover letter
(use "Print with Filename")

21 Mail stamped label & cover letter to registrant

22 File stamped label & cover letter in jacket

23 Add cover letter to ELL
(mandatory if accepted with comments)

24 Close submission in OPPIN

out-process

process - big picture
1- create OPPIN tracking
2- put label in ELL; link to S#
3- save ELL label to MyDocuments
4- compare / comment
5- outprocess

techniques to know
- filename for e-labels
- "print with filename"
- compare / comment
- printing with comments

Group 11 Fungicide

UPGRADE™ Fungicide

Broad spectrum fungicide for the control of turf and ornamental plant diseases

ACTIVE INGREDIENT	
Azoxystrobin (methyl (E)-2-{2-[6-(2-cyanophenoxy)pyrimidin-4-yloxy]-phenyl}-3-methoxyacrylate	22.9%
OTHER INGREDIENTS	77.1%
TOTAL	100.0%

Contains 2.08 pounds of active ingredient per gallon

KEEP OUT OF REACH OF CHILDREN.

CAUTION / PRECAUTIÓN

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.
(If you do not understand the label, find someone to explain it to you in detail.)

SEE LABEL BOOKLET FOR FIRST AID AND PRECAUTIONARY STATEMENTS

EPA REG. NO. 228-XXX

EPA Est. No. _____

MANUFACTURED FOR
NUFARM AMERICAS INC.
11901 S. AUSTIN AVENUE
ALSIP, IL 60803

Nufarm

NET CONTENTS: _____ (Gal.) (_____ liters)

[Designation as "NONREFILLABLE" or "REFILLABLE" for containers > 5 GAL]

000228-00XXX.20130925.draft

FIRST AID	
IF ON SKIN OR CLOTHING	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.

HOTLINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact (877) 325-1840 for emergency medical treatment information.

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION / PRECAUCTIÓN

Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemically resistant to this product are listed below. If you want more options follow the instructions for Category A on an EPA chemical resistance category selection chart.

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical resistant gloves made of any waterproof material such as polyvinyl chloride, nitrile rubber or butyl rubber.
- Shoes plus socks

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions exist for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Controls

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240 (d)(4-6), the handler PPE requirements may be reduced or modified as specified in the WPS.

IMPORTANT: When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for "applicators and other handlers" and have such PPE immediately available for use in an emergency, such as a spill or equipment breakdown.

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Wash thoroughly with soap and water after handling.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to freshwater and estuarine/marine fish and aquatic invertebrates. Do not apply directly to water except as specified on this label. For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwater or rinsate.

The active ingredient, azoxystrobin, in this product can be persistent for several months or longer. Azoxystrobin has degradation products which have properties similar to chemicals which are known to leach through soil to ground water under certain conditions as a result of agricultural use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.

Notify State and/or Federal authorities and Nufarm immediately if you observe any adverse environmental effects due to use of this product.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

FAILURE TO FOLLOW THE USE DIRECTIONS AND PRECAUTIONS ON THIS LABEL MAY RESULT IN PLANT INJURY OR POOR DISEASE CONTROL

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), notification to workers, and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water is:

- Coveralls
- Chemical resistant gloves made of any waterproof material such as polyvinyl chloride, nitrile rubber or butyl rubber
- Shoes plus socks

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box only apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Turf and Landscape Uses: Do not enter or allow others to enter the treated area until sprays have dried.

PRODUCT INFORMATION

This product is a suspension concentrate (SC) or flowable formulation. It is a broad spectrum, preventive fungicide with systemic and curative properties recommended for the control of many important plant diseases. This product may also improve the yield and/or quality of the crop. These additional benefits are due to positive effects on plant physiology. The effects may vary according to factors such as the crop, crop hybrid, or environment. This product may be applied as a foliar spray in alternating spray programs or in tank mixes with other registered crop protection products. Make all applications according to the use directions on this label.

USE PRECAUTIONS AND LIMITATIONS

Some phytotoxicity may be observed when applying tank mixtures of this product with emulsifiable concentrate (EC) formulations. These effects may be enhanced if applications are made under cool, cloudy conditions and these conditions remain for several days following application. In addition, adjuvants that contain some forms of silicone may also contribute to phytotoxicity.

ATTENTION

This product is extremely phytotoxic to certain apple varieties.

AVOID SPRAY DRIFT. Extreme care must be used to prevent injury to apple trees (and apple fruit) Refer to SPRAY DRIFT MANAGEMENT information below.

DO NOT spray this product where spray drift may reach apple trees.

DO NOT spray apple trees with spray equipment previously used to apply this product. Even trace amounts of product may cause unacceptable phytotoxicity to certain apple and crabapple varieties.

SPRAY DRIFT MANAGEM...

The interaction of many equipment and weather related factors determine the potential for spray drift.

DO NOT spray when conditions favor drift beyond the area intended for application. Conditions which may contribute to drift include thermal inversion, wind speed and direction, sprayer nozzle/pressure combinations, spray droplet size, etc. Contact your State Extension agent for spray drift prevention guidelines in your area.

DO NOT apply when weather conditions favor drift from treated areas to non-target aquatic habitet.

AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR.

INTEGRATED PEST MANAGEMENT (IPM)

To reduce the potential for development of resistance, integrate this product into an overall disease and pest management strategy whenever the use of a fungicide is required. Follow cultural practices known to reduce disease development such as selection of disease-tolerant varieties, removal of plant debris in which inoculum overwinters, and proper timing and placement of irrigation. Consult with your State Agricultural Experiment Station or Extension Service specialist for additional IPM strategies established for your area. This product may be used in State Agricultural Extension advisory (disease forecasting) programs which recommend application timing based on environmental factors favorable for disease development.

Crop Tolerance: Plant tolerance has been found to be acceptable for all crops on the label. However, not all possible tank mixture combinations have been tested under all conditions. It is recommended to test tank mixture combinations on a small portion of the crop to assess plant response before large scale applications. See the USE PRECAUTIONS AND LIMITATIONS section for apple phytotoxicity information.

RESISTANCE MANAGEMENT

This product is a Group 11 fungicide. The mode of action for azoxystrobin, the active ingredient in this product, is the inhibition of the Qol (quinone outside) site within the electron transport system as well as disruption of membrane synthesis by blocking demethylation [Group 11]. Fungal pathogens can develop resistance to products with the same mode of action when used repeatedly. Because resistance development cannot be predicted, use this product in accordance with resistance management strategies established for the crop and use area. Consult your local or State agricultural authorities for resistance management strategies that are complementary to those in this label. Resistance management strategies may include alternating and/or tank-mixing with products having different modes of action or limiting the total number of applications per season. Nufarm Americas Inc. encourages responsible resistance management to ensure effective long-term control of the fungal diseases on this label with Group 11 (Qol) fungicides.

Follow the crop specific resistance management recommendations provided in the directions for use.

If no resistance recommendation on number of applications is specified in the directions for use, follow the recommendations in the table below.

If planned total number of fungicide applications per crop is:	1	2	3	4	5	6	7	8	9	10	11	12
Recommended Solo Qol fungicide sprays	1	1	2	2	2	2	2	3	3	3	3	4
Recommended Qol fungicide sprays in mixture (tank-mix or formulated)	1	2	2	2	2	3	3	4	4	5	5	6

Under conditions requiring multiple fungicide applications, develop season long spray programs for Group 11 (QoI) fungicides. In crops where two sequential Group 11 fungicide applications are made, alternating with two or more applications of a fungicide that is not in Group 11 will help reduce the potential for resistance development. If more than 12 applications are made, observe the following guidelines:

- When a QoI fungicide is used as a solo product, make no more than 1/3 (33%) of the total number of fungicide applications per season with the QoI containing product.
- For programs including tank mixes or premixes of QoI fungicide with mixing partners of a different mode of action, the number of QoI containing applications must represent no more than 1/2 (50%) of the total number of fungicide applications per season.
- In programs including applications of QoI fungicides as both solo products and mixtures, the number of QoI containing applications must represent no more than 1/2 (50%) of the total number of fungicide applications per season.

If a Group 11 fungicide is applied to the seed or soil, do not make another application with a Group 11 fungicide for at least 3 weeks.

SOIL BORNE/SEEDLING DISEASE CONTROL

For crops that have specific use directions for soil borne disease control:

This product can provide control of many soil borne diseases if applied early in the growing season. Specific applications for soil borne diseases include in-furrow applications and banded applications applied over the row, either shortly after plant emergence or during herbicide applications or cultivation. These applications will provide control of pre- or postemergence damping off and diseases that infect plants at the soil-plant interface.

The use of either type of application depends on the regional cultural practices. In some locations, one type of application may provide better disease control than the other, depending on the timing of the disease epidemic. Seedling diseases are generally controlled by in-furrow applications while banded applications are more effective against soil borne diseases that develop later in the season. Consult your local expert to get some guidance regarding application type.

Under cool, wet conditions, crop injury from soil directed applications can occur.

Drip

Refer to the **Instructions for Use through Irrigation Systems (Chemigation) section.**

PRODUCT USE INSTRUCTIONS

Application: Thorough coverage is necessary to provide good disease control. Make no more spray solution than is needed for application. Avoid spray overlap, as crop injury may occur.

Adjuvants: The use of an adjuvant may improve consistency and performance of this product. Refer to crop specific directions for use for information regarding the use of adjuvants.

Efficacy: Under certain conditions conducive to extended infection periods, use another registered fungicide for additional applications once the maximum amount of this product has been used. If resistant isolates to Group 11 fungicides are present, product performance may be reduced for certain diseases. When heavy infection pressure exists, when treating varieties highly susceptible to disease, or when environmental conditions are conducive to disease development, best results are obtained when using the higher rates and/or the shorter spray intervals allowed in the crop specific use directions on this label..

MIXING AND APPLICATION INSTRUCTIONS

Spray Equipment

All types of spray equipment commonly used for ground and aerial applications may be used with this product. Proper adjustment and calibration of spraying equipment to give good canopy penetration and coverage is essential for good disease control.

Nozzles

- Equip sprayers with nozzles that provide accurate and uniform application.
- Use nozzles that are the same size and uniformly spaced across the boom.
- Calibrate sprayer before use.
- Use screens to protect the pump and to prevent nozzles from clogging.
- Use screens 16-mesh or coarser on the suction side of the pump.
- Do not place a screen in the recirculation line.

- Use 50-mesh or coarser screens between the pump and boom, and where required, at the nozzles.
- Check nozzle manufacturer's use guidelines.

Pump

- Use a pump with capacity to:
  a) Maintain 35 to 40 psi at nozzles.
  b) Provide sufficient agitation in tank to keep mixture in suspension. This requires recirculation of 10% of tank volume per minute.
- Use a jet agitator or liquid sparge tube for agitation.
- Do not air sparge.

For more information on spray equipment and calibration, consult sprayer manufacturers and state agricultural agency for advice. For specific local directions and spray schedules, consult your state agricultural agency for advice.

Spray Solution Preparation

- Proper mixing of this product with water requires use of a spray tank equipped with agitation.
- Prepare only the amount of spray solution required for immediate use. Do not allow spray mixture to stand overnight or for prolonged periods.
- Thoroughly clean spray equipment before preparing the spray solution.
- Maintain constant agitation throughout the spraying operation.
- Rinse spray tank thoroughly with clean water after each day's use and dispose of pesticide rinsate by application to an already treated area

Stand-alone product solution:

- Add ½ to ⅔ of the required amount of water to a spray or mixing tank and begin agitation.
- Add the specified amount of this product to the tank.
- Continue agitation while adding the remainder of the water and allow time for good dispersion.
- Begin application of the spray solution after the product has completely dispersed in the mix water and maintain agitation during spraying.

Tank mixture with other products:

- Add ½ to ⅔ of the required amount of water to a spray or mixing tank and begin agitation.
- Add tank mix partners to the tank in the following order: 1) wettable powder and water dispersible granule (WDG) formulations, 2) liquid flowables (aqueous suspensions), and 3) emulsifiable concentrates.
- Allow the material to completely dissolve and disperse into the mix water.
- Continue agitation while adding the remainder of the water and this product to the tank mix and allow time for good dispersion
- Begin application of the spray mixture while maintaining agitation.

Compatibility

This product is compatible with many pesticides and additives commonly used in tank mixtures. To determine the physical compatibility of this product with other products prior to full scale use, conduct a jar test as follows: Using a quart jar, add the proportionate amounts of the tank mixture components to 1 qt. of water. Add wettable powders and water dispersible granule (WDG) products first, then liquid flowables, and emulsifiable concentrates last. Mix thoroughly and let stand for at least 5 minutes. If the combination remains mixed or can be remixed readily, it is physically compatible. Once compatibility has been confirmed, use the same procedure for adding required ingredients to the spray tank.

NOTE: Some phytotoxicity may be observed when applying tank mixtures of this product with emulsifiable concentrate (EC) formulations. These effects may be enhanced if applications are made under cool, cloudy conditions and these conditions remain for several days following application. In addition, adjuvants that contain some forms of silicone may also contribute to phytotoxicity.

INSTRUCTIONS FOR USE THROUGH IRRIGATION SYSTEMS (CHEMIGATION)

- Use only on crops for which chemigation is specified on this label.
- Apply this product through 1) sprinkler irrigation systems including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move; 2) drip irrigation systems. Do not apply this product through any other type of irrigation system.
- Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water
- Apply in 0.1-0.25 inches of water per acre. Excessive water may reduce efficacy

- If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers, or other experts.
- Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.
- A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

Spray Preparation: Clean chemical tank and injector system thoroughly. Flush system with clean water.

Drip Irrigation: This product may be applied through drip irrigation systems for soil-borne disease control. The soil should have adequate moisture capacity prior to drip application.

Terminate drip irrigation at fungicide depletion from the main feed supply tank or after 6 hours from start, whichever is shorter. For maximum efficacy, delay subsequent irrigation (water only) for at least 24 hours following drip application.

Sprinkler Irrigation

Apply this product through sprinkler irrigation systems including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move. Apply with center pivot or continuous-move equipment distributing 1/2 acre-inch or less during treatment. In general, use the least amount of water required for proper distribution and coverage. If stationary systems (solid set, handlines or wheel lines other than continuous-move) are used, inject this product into no more than the last 20-30 minutes of the set.

Do not apply when winds are greater than 10-15 mph to avoid drift or wind skips. Do not apply when wind speed favors drift beyond the area intended for treatment.

Plant injury, lack of effectiveness, or illegal pesticide residues in the crop may result from non-uniformly treated water. Thorough coverage of foliage is required for good control. Good agitation should be maintained during the entire application period.

If you have questions about calibration, contact your State Extension Service specialist, equipment manufacturer or other experts.

Operating Instructions:

1. Do not apply when wind speed favors drift beyond the area intended for treatment.
2. The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water-source contamination from backflow.
3. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
4. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
5. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
6. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
7. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
8. Allow sufficient time for pesticide to be flushed through all lines and all nozzles before turning off irrigation water. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.
9. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

Center Pivot Irrigation Equipment

Notes: (1) Use only with drive systems which provide uniform water distribution. (2) Do not use end guns when applying this product through center pivot systems as it may result in non-uniform application.

- Determine the size of the area to be treated.
- Determine the time required to apply 1/8 to 1/2 inch of water over the area to be treated when the system and injection equipment are operated at normal pressures as specified by the equipment manufacturer. When applying this product through irrigation equipment use the lowest obtainable water volume while maintaining uniform distribution. Run the system at 80-95% of the manufacturer's rated capacity.
- Using water, determine the injection pump output when operated at normal line pressure.
- Determine the amount of product required to treat the area covered by the irrigation system.
- Add the required amount of product and sufficient water to meet the injection time requirements to the solution tank.
- Make sure the system is fully charged with water before starting injection of the spray solution. Time the injection to last at least as long as it takes to bring the system to full pressure.
- Maintain constant agitation of the spray solution during the injection period.
- Continue to operate the system until the spray solution has cleared the sprinkler head.

Solid Set, Hand Move, and Moving Wheel Irrigation Equipment

- Determine the acreage covered by the sprinklers.
- Fill injector solution tank with water and adjust flow rate to use the contents over a 20 to 30-minute interval. When applying this product through irrigation equipment, use the lowest obtainable water volume while maintaining uniform distribution.
- Determine the amount of product required to treat the area covered by the irrigation system.
- Add the required amount of product into the same quantity of water used to calibrate the injection period.
- Operate the system at the same pressure and time interval established during the calibration.
- Stop injection equipment after treatment is completed. Continue to operate the system until the spray solution has cleared the last sprinkler head.

Specific Instructions for Public Water Systems

1. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
2. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, back-flow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, discharge the water from the public water system into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
3. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
4. The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
5. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. Do not apply when wind speed favors drift beyond the area intended for treatment.

SPECIFIC USE DIRECTIONS

TURF:

UPGRADE may be used for control of certain pathogens causing foliar, stem, and root diseases, including leaf and stem blights, leaf spots, patch diseases, mildews, anthracnose, fairy rings, molds, and rusts of turfgrass plants. UPGRADE may be used to control certain diseases on turf in golf courses, lawns and landscape areas around residential, institutional, public, commercial and industrial buildings, parks, recreational areas and athletic fields.

Integrated Pest (Disease) Management (IPM): Sound turf management resulting healthy, vigorous turf is the foundation of a good IPM program. Cultural practices such as proper choice of turf variety, nutrient-management, proper cutting height, thatch management, and proper watering, drainage, and

moisture stress management should be integrated with the use of fungicides to increase turf vigor and reduce the susceptibility to disease, immunoassay detection kits and extension service diagnostic services can assist in the early and accurate identification of causal organisms and corresponding selection of the proper fungicide when required.

Resistance Management: Some turf disease pathogens are known to have developed resistance to products used repeatedly for their control. UPGRADE should be applied at full use rates in a tank mix or alternation program with other registered fungicides that have a different mode of action and to which pathogen resistance has not developed. Since UPGRADE is a strobilurin fungicide, avoid alternation with other strobilurins, such as kresoxim-methyl and trifloxystrobin. Do not apply more than two [2] sequential UPGRADE applications for Gray Leaf Spot and *Pythium spp.* control. For all other diseases when Gray Leaf Spot and *Pythium spp.* are not present, do not apply more than three sequential applications of UPGRADE.

DIRECTIONS FOR APPLICATION FOR TURF DISEASES

Application Directions: UPGRADE should be applied prior to disease development. Mix UPGRADE with the required amount of water and apply as a dilute spray application in 1 to 3 gals. of water per 1000 sq. ft. (44-132 gals./A). Repeat applications at specified intervals for as long as required. For spot treatments, use **0.38** fl. oz. UPGRADE per 1 to 3 gals. of water. Do not apply more than **2.4** gals. product/acre/year (**7.1** fl. oz. product/1000 sq. ft./year). Applications may be made by ground only.

Dollar Spot: UPGRADE does not control dollar spot. During periods of dollar spot pressure, always mix UPGRADE with **Legend®**, **Spectro™**, **26/36®** or another dollar spot control fungicide. UPGRADE is compatible in tank mixes with many other fungicides that control dollar spot.

Target Diseases	Use Rate (fl. oz. product	Application Interval (days)	Remarks*
Anthracnose *(Colletotrichum graminicola)*	0.38-0.77 1-2 pints/acre	14-28	Use preventatively. Begin applications when conditions are favorable for disease infection, prior to disease symptom development.
Brown Patch *(Rhizoctonia solani*	0.38-0.77 1-2	14-28	Apply when conditions are favorable for disease development.
Cool Weather Brown Patch Yellow Patch *(Rhizoctonia cerealis)*	0.77 2 pints/acre	28	Make one or two applications in fall or when conditions are favorable for disease development.
Fairy Ring *(Lycoperdon* spp., *Agrocybe pediades, and Bovistra plumbea)*	0.77 2 pints/acre	28	For prevention in Cool season turf, initiate applications in the spring when root zone soil temperatures reach 55-60° F. Make a second application using a 28day interval. Immediately after fungicide is applied, irrigate the area with sufficient water to move the active ingredient down into the crown and active root zone of the turf. The amount of water is dependent on the depth of the root zone. Do not use a wetting agent unless hydrophobic soil conditions exist. Fairy ring symptoms may take 2 to 3 weeks to disappear following application. Alternate with another fungicide with a different mode of action, such as Affirm®, Torque® or Prostar®. For hydrophobic areas, Use an appropriate wetting agent to effectively penetrate the hydrophobic zone commonly created with this disease.
Fusarium Patch *(Microdochium nivale)*	0.38-0.77 1-2 pints/acre	14-28	Use preventatively. Begin applications when conditions are favorable for disease infection, prior to disease symptom development.
Gray Leaf Spot *(Pyricularia grisea)*	0.38-0.77 1-2 pints/acre	14-28	Begin applications before disease is present and continue applications while conditions are favorable for disease development.

Leaf Rust Stem Rust Stripe Rust *(Puccinia* spp.)	0.38-0.77 1-2 pints/acre	14-28	Begin applications when conditions are favorable for disease infection, prior to disease symptom development.
Leaf Spot *(Bipolaris sorokiniana)*	0.38-0.77 1-2	14-21	Apply when conditions are favorable for disease development.
Melting Out *(Drechslera poae)*	0.38-0.77 1-2	14-21	Apply when conditions are favorable for disease development
Necrotic Ring Spot *(Leptosphaeria korrae)*	0.77 2 pints/acre	14-28	Apply when conditions are favorable for disease development.
Pink Patch *(Limonomyses roseipellis)*	0.38-0.77 1-2	14-28	Apply when conditions are favorable for disease development.
Powdery Mildew *(Erysiphe graminis)*	0.38-0.77 1-2 pints/acre	14-28	Begin applications when conditions are favorable for disease infections prior to disease symptom development.
Pythium Blight Pythium Root Rot *(Pythium aphanidermatum, Pythium* spp.)	0.77 2 pints/acre	10-14	Use preventatively. Begin applications when conditions are favorable for disease infection, prior to disease symptom development. During periods of prolonged favorable conditions, treat on the 10 day application interval. For use on newly seeded as well as established turf.

Target Diseases	**Use Rate (fl. oz. product**	**Application Interval (days)**	**Remarks***
Red Thread *(Laetisaria fuciformis)*	0.38-0.77 1-2	14-28	Apply when conditions are favorable for disease development.
Rhizoctonia Large Patch *(Rhizoctonia solar)))*	0.77 2 pints/acre	14-28	Make one or two applications in fall or when conditions are favorable for disease development.
Rhizoctonia Leaf Spot *(Rhizoctonia zeae)*	0.77 2	14-28	Apply when disease conditions are favorable for disease development.
Southern Blight *(Sclerotium rolfsii)*	0.38-0.77 1-2	14-28	Apply when conditions are favorable for disease development.
Spring Dead Spot *(Leptosphaeria korrae)* or *(Gaeumannomyces graminis var. graminis)* or *(Ophiosphaerella herpotricha)*	0.77 2 pints/acre	21-28	Apply applications approximately when soil temps in the root zone reach 80F our approximately two months prior to bermudagrass dormancy. Water application into root zone. 1/4" to 1/2" of irrigation directly after application is recommended. Reapply 14 to 28 days later. Tank mixing with other SDS products such as Torque may enhance control under severe disease pressure.
Snow Molds Gray Snow Mold Typhula Blight *(Typhula incarnata)* Pink Snow Mold *(Microdochium nivale)*	0.77 - 1.35 2 - 3 2/3 pints/acre	single application	Make a single application of 0.77 - 1.35 fl. oz. in late fall just before snow cover. Tank mixing with other snow mold fungicides, such as Torque, 26/36, Legend, or Spectro may enhance control under severe disease pressure.
Summer Patch *(Magnaporthe poae)*	0.38-0.77 1-2	14-28	Apply when conditions are favorable for disease development.
Take-all Patch *(Gaeumannomyces graminis var. avenae)*	0.77 2 pints/acre	28	Begin applications when conditions are favorable for disease infection, prior to disease symptom development. Make two applications, 28 days apart in the spring and two applications 28 days apart in the fall.
Zoysia Patch *(Rhizoctonia solani and/or Gaeumannomyces incrustana)*	0.38-0.77 1-2 pints/acre	14-28	Apply 1 or 2 applications approximately one month prior to zoysiagrass dormancy. Reapply 14 to 28 days later.

*Do not apply more than two sequential applications of UPGRADE for control of Gray Leaf Spot and *Pythium* spp. For all other diseases when Gray Leaf Spot and *Pythium* spp. are not present, do not apply more than three sequential applications of UPGRADE.

UPGRADE Rate Conversion Chart for Turf

Fl. Oz. Product Per 1000 Sq. Ft.	Oz. a.i. Per 1000 Sq. Ft.	Pints Product Per Acre
0.38	0.006	1.03
0.58	0.009	1.58
0.77	0.013	2.10
0.96	0.016	2.61
1.15	0.019	3.13
1.35	0.022	3.67

Small Volume Application - Amount of UPGRADE to Mix per Gallon for Turf Applications

UPGRADE Use Rate fl. oz./1000 sq. ft.	Amount UPGRADE per volume [milliliters]		
	1 gallons	3 gallons	5 gallons
0.38	11.2	33.6	56.0
0.58	17.2	51.6	86.0
0.77	22.8	68.4	114.0
0.96	28.4	85.2	142.0
1.15	34.0	102.0	170.0
1.35	39.9	119.7	199.5

ORNAMENTALS

UPGRADE is recommended for control of certain pathogens causing foliar, aerial, and root diseases, including leaf, tip, and flower blights, leaf spots, downy mildew, powdery mildew, anthracnose, and rusts of ornamental plants. UPGRADE may be used to control listed diseases of herbaceous, deciduous and evergreen ornamentals and listed vegetable transplants grown in greenhouses, lath houses, hoop houses, and shadehouses, and herbaceous, deciduous and evergreen ornamentals grown in field, container, nurseries, retail nurseries, and other residential and commercial landscape areas.

Integrated Pest (Disease) Management:

UPGRADE should be integrated into an overall disease management strategy that includes selection of varieties with disease tolerance, optimum plant populations, proper fertilization, winter and/or spring pruning, plant residue management and proper timing and placement of irrigation.

Resistance Management: Some ornamental disease pathogens are known to have developed resistance to fungicides used repeatedly for their control. UPGRADE should be applied in an alternation or tank mix program with other registered fungicides that have a different mode of action and to which pathogen resistance has not developed. Do not make more than two (2) sequential applications of UPGRADE before alternating with a fungicide of a different mode of action. Do not alternate UPGRADE with other FRAC 11 or strobilurin fungicides.

Application Directions: Apply UPGRADE as a broadcast or banded spray targeted at the foliage or crown of the plant. Apply to runoff in sufficient water to ensure complete coverage of the target plant. Good coverage and wetting of foliage is necessary for best control. Refer to the label for specific use directions for control of certain diseases. Repeat applications at specified intervals (plus alternations for resistance management) for as long as required. Applications may be made by ground only.

UPGRADE applications should begin prior to disease development and continue throughout the season at specified intervals following resistance management guidelines. UPGRADE works best when used as part of a preventative disease management program.

Use only surfactants approved for ornamental plants in combination with UPGRADE. Do not use silicone based products with Heritage Fungicide due to possible phytotoxicity. Always test tank mixes on a small group of representative plants prior to broad scale use.

Apply UPGRADE at use rates of 1.9-7.7 fluid ounces/100 gallons every 7-28 days (or as otherwise specified for a specific plant or disease). The addition of a non-silicone based wetter-sticker at the recommended use rate may enhance coverage on hard-to-wet plant foliage.

Under most conditions and for most diseases, apply 3.9-7.7 fluid ounces/ 100 gallons on a 7-14 day interval.

Under light to moderate disease pressure, use the lower rates (1.9-3.9 fl oz/100 gallons) on a 7-14 day interval or the higher rates (5.8-7.7 fl oz/100 gallons) on a longer 14-28 day interval.

Under environmental conditions which promote severe disease development, use the higher rates (5.8-7.7 fl oz/100 gallons) on a 7-14 day interval. Use of UPGRADE as a "rescue" (late curative or eradicant) treatment may not always result in satisfactory disease control.

In addition, do not tank mix UPGRADE with other fungicides, insecticides, herbicides, fertilizers, adjuvants, etc, unless local experience indicates that the tank mix is safe to ornamental plants.

Drench Application: UPGRADE may be applied to control soilborne, seedling, and crown diseases of production ornamentals (greenhouse, hoop house, lath house, shadehouse, and field or container grown) as a preventative, drench treatment prior to infection. Good coverage of the pre-infection area (root zone, root ball, crown, etc.) is necessary for satisfactory control. UPGRADE may be drench applied to container grown ornamentals using 0.39-1.7 fluid ounces/100 gallons of water. Apply 1-2 pints of the solution per square foot surface area on a 7-28 day interval. Apply drench prior to infection as healthy roots are necessary to optimize product uptake, systemic translocation and disease protection. For resistance management do not make more than three sequential drench applications of UPGRADE before alternating with a fungicide of a different mode of action. Caution should be taken before making application of UPGRADE as a drench to small bedding plants in the seedling/plug stage due to possible phytotoxicity. A limited quantity of plants should be tested prior to full-scale application.

Drip Irrigation: UPGRADE may be applied through drip irrigation systems to potted ornamentals or to bedded, field grown ornamentals for soil-borne disease control. Apply 3.9-30.8 fluid ounces UPGRADE per acre as a preventative disease application. The soil or potting media should have adequate moisture capacity prior to drip application. Terminate drip irrigation at fungicide depletion from the main feed supply tank or after 6 hours from start, whichever is shorter. For maximum efficacy, subsequent irrigation (water only) should be delayed for at least for 24 hours following drip application.

General Ornamental Use Precautions
Do not apply UPGRADE to apple or cherry trees (Flowering, Yoshina variety) due to possible phytotoxicity. Furthermore, do not use spray equipment that has applied UPGRADE for use in these sensitive crops due to possible phytotoxicity from residue remaining in the sprayer. UPGRADE may be applied to certain varieties of crabapple for control of apple scab. UPGRADE has been shown to be safer when applied to the species and varieties listed in Table 4. However, due to the large number of genera, species, and varieties of crabapple, it is impossible to test every one for tolerance to UPGRADE. The professional user should conduct small scale testing to insure plant safety prior to broadscale commercial use on plant genera and species not listed on this label.
Do not exceed 2.4 gallons product/crop acre/year or 8 applications/crop/year.
Do not exceed 600 gallons spray volume per acre for foliar applications.
Do not exceed 2 pints volume per square foot for drench and crown applications,

TABLE 1: Diseases Controlled: When used in accordance with the label directions, UPGRADE will provide control of the following diseases of ornamental plants:

Disease [Pathogen]	Use Rates and Specific Instructions [fluid ounces product per 100 gallons]
[1] CONIFER BLIGHTS Phomopsis Blight (Phomopsis juniperovora) Tip Blight (Sirococcus strobilinus)	1.9 – 7.7 fl oz every 7-28 days
[2] LEAF BLIGHTS/LEAF SPOTS Alternaria Leaf Spot (Alternaria spp.) Anthracnose (Colletotrichum spp., Elsinoe spp.)	1.9 – 7.7 fl oz every 7-28 days

Downy Mildew of Rose (Peronospora sparsa)	3.9 – 7.7 fl oz every 7-21 days during periods of active plant growth and prior to dormancy or severe infection.
Entomosporium Leaf Spot (Entomosporium mespili)	1.9 – 7.7 fl oz every 7-28 days
Iris Leaf Spot (Mycosphaerella macrospora)	3.9 – 7.7 fl oz every 7-28 days
Leaf spot (Cladosporium echinulatum)	1.9 – 7.7 fl oz every 7-28 days
Rose Blackspot (Diplocarpon rosea)	7.7-15.4 fl oz every 7-14 days. Under severe disease conditions or if disease is already present, UPGRADE may be tank mixed with other fungicides such as Protect, Legend, or 3336 for enhanced disease management. Do not exceed 46 fl oz/acre/application.
Myrothecium leaf spot (Myrothecium spp.) Downy Mildew of bedding plants (Peronospora spp.)	3.9-7.7 fl oz every 7-28 days
Scab (Venturia inaequalis)	**For crabapples only, see Table 4 for tolerant species. Do not apply to apple trees.** 1.9 – 7.7 fl oz every 10-28 days.
Marrsonina Leaf Spot (Marsonina spp.) Cercospora Leaf Spot (Cercospora sp.)	1.9 – 7.7 fl oz 10-28 days.
[3] POWDERY MILDEW Erysiphe pannosa, Erysiphe spp. Microsphaera azaleae Sphaerotheca pannosa	Preventative applications only. Do not make more than 2 sequential applications before rotating to another class of fungicide. 1.9 – 7.7 fl oz every/ 7-28 days
[4] RUSTS Needle Rust (Melampsora occidentalis) Phragmidium spp. Pucciniaspp. Gymnosporagium spp.	 1.9 – 7.7 fl oz every/ 7-28 days. Alternation with a DMI Class fungicide such as Torque can enhance disease management.
[5] FLOWER BLIGHTS Anthracnose (Collectotrichum spp., Elsinoe spp.)	 1.9 – 7.7 fl oz every/ 7-28 days
Botrytis Blight (Botrytis cinerea)	For suppression only. 7.7-15.4 fl oz every 7-21 days. Do not exceed 46 fl oz/acre. Rotation or tank mixing with other fungicides such as Protect, Legend, Spectro, Affirm, or 3336 will enhance disease management.
[6] SHOOT/STEM DISEASES Aerial/Shoot Blight (Phytophthora spp.)	 1.9-3.9 fl oz every 7-28 days
[7] SOILBORNE DISEASES [Directed Spray or Sprench] Rhizoctonia solani Sclerotium rolfsii Fusarium spp.	Apply as a directed spray or sprench to the soil surface and lower stem and crown area of the plant. 1.9 – 7.7 fl oz every 7-21 days.
[8] SOILBORNE DISEASES [Drench] Rhizoctonia solani Sclerotium rolfsii Fusarium spp.	0.39-1.7 fl oz [11-51 mL] Apply 1-2 pints of the solution per square foot surface area, every 7-28 days. See Ornamentals Section for additional drench directions.

PLANT SAFETY: NUP-8099 has been shown to be safe when applied to the ornamental plants listed in Tables 2 and 3. However, due to the large number of genera, species and varieties of ornamental and nursery plants, it is impossible to test every one for tolerance to UPGRADE. Neither the manufacturer no

the seller has determined whether or not UPGRADE can be used safely on genera, species, or varieties of ornamental and nursery plants not specified on this label. The professional user should conduct small scale testing to insure plant safety prior to broad scale commercial use on plant genera and species not listed in this label. In addition, do not tank mix UPGRADE with other fungicides, insecticides, herbicides, fertilizer, adjuvants, etc, unless local experience indicates that the tank mix is safe to ornamental plants.

Do not apply UPGRADE to certain apple, crabapple, or cherry trees due to possible phytotoxicity. Furthermore, do not use spray equipment that has applied UPGRADE for use in these sensitive crops due to possible phytotoxicity from residue remaining in the sprayer.

Tolerant Ornamental Plants: UPGRADE has been found to be safe when applied to the plants listed in Tables 2 and 3 when applied according to recommended application methods, rates, and timings.

TABLE 2; Tolerant Plants Listed by Botanical Name

BOTANICAL NAME	COMMON NAME	DISEASES
Abelia spp.	Abelia	2
Abies fraseri	Fraser fir	1,4
Abies procera	Noble Fir	1,4
Acer palmatum	Japanese maple	2
Acer saccharum	Sugar maple	2
Ageratum spp.	Floss-Flower	3,4
Ageratum spp.	Pussy's-Foot	3,4
Aglaonema spp.	Chinese evergreen	2,4
Ajuga reptans	Bugle, Bugleweed	3
Antirrhinum spp.	Snap-Dragon	2[DM],3,4
Aphelandra spp.	Zebra-Plant	2
Artemisia spp.	Mugwort, Sagebrush	2
Artemisia spp.	Wormwood	2
Aster spp.	Aster, Starwort	4
Aucuba japonica	Japanese aucuba, Japanese laurel	7
Begonia spp. (except Rieger begonia)	Begonia	2,3
Berberis thunbergii	Barberry	3,4
Betula nigra	River birch	3,4
Bougainvillea spp.	Bougainvillea	2
Brassaia actinophylla	Rubber-tree, Umbrella-tree	2,7
Buddleia davidii	Buddleia, Butterfly-bush	2
Buxus sempervirens	Boxwood	2,7
Caladium spp.	Caladium	7
Camellia japonica	Camellia	2
Caryota urens	Sago Palm	2,7
Catharanthus roseus	Vinca	2
Ceanothus sanguineus	Wild lilac	3
Ceanothus spp.	Ceanothus, California lilac, Snowball	3
Cedrus atlantica	Atlas cedar	2,4
Cedrus spp.	White cedar	2,4
Cercis occidentalis	Western redbud	2
Chamaecyparis spp.	Cypress, Leyland cypress	1
Chamaecyparis pisifera	Sawara cypress	1
Chamaedora elegans	Parlor palm	7
Chrysanthemum spp.	Chrysanthemums	2, 7
Clethra alnifolia	Clethra, White alder	2
Cornus spp.	Dogwood, Pink dogwood, Flowering dogwood	2,3
Cornus florida	Dogwood	2,3
Cortaderia selloana	Pampas grass	3
Cotoneaster adpressus	Creeping Cotoneaster	7
Cotoneaster horizontalis	Cotoneaster – variegated rockspray	7
Cyclamen spp.	Cyclamen	7
Cyperus spp.		

Delphinium spp.	Cyperus	1
Dianthus caryophyllus	Larkspur	2
Dianthus spp.	Carnation	3,4
Dieffenbachia spp.	Pink	3,4
Dietes iridiodes	Oumb-Cane	2
Digitalis spp.	African iris, Butterfly iris	4
Epipremnum spp.	Foxglove	2,3
Erica dareyensis	Pothos	2
Euonymus alata	Heather	2
Euonymus alatus	Dwarf winged euonymus	2
Euonymus 15ndromeda	Burning bush	2
Euphorbia spp.	Evergreen euonymus	2
Fatsia japonica	Poinsettia	2
Ficus spp.	Japanese fatsia, Paper-plant	2
Forsythia viridissima	Fig	2
Gaillardia spp.	Forsythia	2
Gardenia jasminoides	Blanket-Flower	2
Geranium spp.	Gardenia	3
Gerbera jamesonii	Cranesbill	5
Hedera algeriensis	Gerber daisy, Transvaal daisy	3
Hedera helix	Algerian ivy	2
Hibiscus moscheutos	English ivy	2
Hibiscus rosa-sinensis	Hibiscus	2,3
Hibiscus syriacus	Hibiscus	2,3
Hosta spp.	Rose of Sharon	2,3
Hydrangea macrophylla	Hosta	2
Hydrangea spp.	French hydrangea	2,3
Ilex spp.	Hydrangea	2,3
Impatiens spp.[1]	Holly, Winterberry, Yaupon	3
Iris xiphium	Balsam, Impatiens [1]	2, 7
Itea virginica	Iris (bulbous, Spanish, Dutch)	2
Juniperus procumbens	Virginia willow	3,4
Juniperus scopulorum	Juniper	1, 4
Juniperus spp.	Juniper	1, 4
Juniperus virginiana	Juniper	1,4
Lagerstroemia indica	Red cedar	1,4
Laurus nobilis	Crapemyrtle	2,3
Lilium spp.	Laurel	3
Liriope muscari	Asiatic Lily	2
Lobulaha maritime	Lily-turf	2
Magnolia grand/flora	Sweet alyssum	7
Magnolia soulangiana	Southern magnolia	2
Magnolia spp.	Saucer magnolia	2
Malus spp.	Magnolia	2
Nandina domestica	Crabapple (See Table 4 for variety list)	2j
Nerium oleander	Nandina	2
Pelargonium spp.	Oleander, Rose-bay	2
Pennisetum alopecuroides	Geranium	3, 4,5
Peperomia spp.	Grass	2
Petunia spp.	Baby rubber-plant	2,7
Phalaris spp.	Petunia	6
Philodendron spp.	Dwarf pampas grass	3
Phlox spp.	Philodendron	2
Phoenix dactylifera	Phlox	3
Phoenix roebelenii	Date palm	2,7
Photinia glabra	Roebelin's palm	2,7
Picea abies	Red-tip photinia	2,3,4
Picea glauca	Norway spruce	1
Picea pungens	White spruce	1

Pieris japonica	Blue spruce	1
Pinus muhgo	Japanese 16ndromeda	2,7
Pinus nigra	Muhgo pine	1, 4
Pinus silvestris	Black pine	1, 4
Pinus spp.	Scotch pine	1,4
Pinus 16ndrome	Pine	1,4
Pittosporum spp.	Eastern white pine	1,4
Pittosporum tobira	Australian laurel	3,4
Plectranthus spp.	Mock-orange	3,4
Populus trichocarpa	Swedish ivy, Coleus	2
Populus spp.	Poplar	4
Potentilla spp.	Aspen Trees	2
Primula spp.	Cinquefoil	2
Prunus pumila	Primrose	2
Prunus spp.	Cherry	2,5
Pseudotsuga spp.	Flowering plum, Purple-leaf plum	2,5
Pyrus calleryana	Douglas fir	1.4
Quercus 16ndrome	Bradford's pear	3
Quercus palustris	Red oak	2,3
Rhaphiolepsis indica	Pin oak	2,3
Rhododendron spp.	Indian hawthorn	2,3,4
Rhododendron spp.	Azaleas, Rhododendron	2 3,6,7
Rosa spp.	Glacier Azalea	2,3,6,7
Rosmarinus spp.	Rose	2,3,4
Rudbeckia hirta	Rosemary (prostrate)	2
Salvia spp.	Black-eyed-susan	2
Schlumbergera	Sage	3,4
Sedum spp.	Holiday cactus	2,7
Sempervivum spp.	Orpine, Stonecrop	2
Setaria spp.	Live-forever, House-Leek	2
Spathiphyllum floribundium	Ribbon-grass	2,3
Spirea budalda	Peace lily	2,7
Spirea japonica	Spirea	3
Syagrus romanzoffianum	Spirea	3
Tagetes spp.	Queen palm	2
Taxus baccata	Marigold	2
Thuja plicata	Spreading yew	7
Thujopsis spp.	Western Red Cedar	4
Thymus serphyllum	Arborvitae	2
Tsuga heterophylla	Creeping thyme	2
Tsuga spp.	Western Hemlock	4
Verbena spp.	Hemlock	4
Viburnum spp.	Verbena, Vervain	3
Vinca spp.	Viburnum	2,3,4
Viola spp. [1]	Periwinkle	2,6
Wiegela florida	Viola, Pansy [1]	2
Yucca spp.	Pink wiegela	2
Zinnia spp.	Yucca	7
	Zinni	2,3

Footnotes: [1] Do not exceed 3.9 fl oz/100 gallons on indicated species

TABLE 3: Tolerant Varieties of Crabapple and Other Malus Species

Arkansas Black	Eleyi	Mary Potter	*M. seiboldii*
M. sanguinea	Enterprise	Molten Lava	Selkirk
M. baccata	Evereste	New Centennial	Sentinel
M. baccata var. jackii	Eyelynn	Ormiston Roy	Silver Moon
M. baccata var. mandshurica	*M. floribunda*	Pink Satin	Silverdrift
Callaway	Gloriosa	Prairie Maid	Sinai Fire
Candymint Sargent	Golden Delicious	Prairifire	*M. spectablis*

Christmas Holly	Golden Raindrops	Profusion	Sugar Tyme
M. coronaria	Hopa	*M. pumila*	Van Eseltine
David	Indian Magic	Ralph Shay	White Angel
Dolgo	Island	Red Jade	Williams Pride
Donald Wyman	Katherine	Red Baron	Winter Gold
Dorothea	Lancelot	Sargent	Yellow Delicious
Doubloons	Louisa	*M. sargentii*	*M. zumi Calocarpa*

TABLE 4: Intolerant Plants – **Do Not Apply UPGRADE to these species or varieties.**

COMMON NAME	BOTANICAL NAME
Apple	*Malus domestica*
Crabapple - Flame variety	*Malus spp.*
Crabapple - Brandywine variety	*Malus spp.*
Crabapple - Novamac variety	*Malus spp.*
Cherry, Flowering - Yoshina variety	*Prunus yedoensis.*
Leatherleaf Fern and Other Ferns for cut foliage	*Rumohra adianformis* and other species for cut foliage
Privet	*Ligustrum spp.*

Conifers including Christmas Trees

UPGRADE may be used to control certain diseases on conifers in production (indoor and outdoor) and landscape situations. Please see the Ornamental Section above for more detailed directions for use in landscape situations.

Target Disease	Use Rate fluid ounces product/A (lb a.i/A)	Application Directions
Diplodia tip blight *(Diplodia pinea)* Lophodermium needlecast *(Lophodermium pinastri)* Swiss needlecast *(Phaeocrytopus gaumannii)*	6.2-15.4 (0.1-0.25)	Begin applications prior to disease development and continue throughout the season at 7-21-day intervals following the resistance management guidelines. Apply by ground, air, or chemigation. An adjuvant may be added at label specified rates. Do not make more than two (2) sequential applications of this product or other Group 11 fungicides before alternating with a fungicide that has a different mode of action.
Specific Use Restrictions: Do not exceed 1 gallon of this product/Acre per season.		

COMMERCIAL PRODUCTION ROSES

Target Disease	Use Rate fluid ounces product/A (lb a.i/A)	Application Directions
Downy Mildew *(Peronospora sparsa)* Powdery Mildew *(Spherotheca pannosa)* Rust *(Phragmidium mucronatum, P. tuberculatum, and other Phragmidium spp.* Septoria Leaf Spot	3.1-15.4 (0.05-0.25)	Heritage application should begin prior to disease development and continue throughout the season on 7-21 day intervals following the resistance management guidelines. Applications may be made by ground, air or chemigation. An adjuvant may be added at recommended rates.

(Septoria rosea) Alternaria Leaf Spot *(Alternaria alternata)*		
Specific Use Restrictions: Do not exceed 1 gallon of this product/Acre per season.		

BRASSICA - LEAFY GREENS Subgroup 5B

Broccoli Raab; Chinese Cabbage (bok choy); Collards; Kale; Mizuna; Mustard Greens; Mustard Spinach; Rape Greens; all Cultivars and/or Hybrids of these

Target Disease	Use Rate fl oz product/A (lb a.i/A)	Application Directions
Black spot *(Alternaria* spp.) Cercospora leaf spot (*Cercospora* spp.) White rust *(Albugo candida)*	6.0-15.5 (0.10-0.25)	Begin applications prior to disease development and continue throughout the season at 7- to 14-day intervals following the resistance management guidelines. Apply by ground, air, or chemigation. An adjuvant may be added at label specified rates. Do not make more than one application of this product or other Group 11 fungicides before alternating with a fungicide that has a different mode of action.
Soilborne Diseases Seedling Root Rot, Basal Stem Rot (*Rhizoctonia solani*)	0.40-0.80 fl oz/1000 row ft	For soilborne/seedling disease control, see directions and rates under **SOILBORNE/SEEDLING DISEASE CONTROL** section.
Use Limitations: Do not exceed 46 fl oz of this product/Acre per season. Do not exceed the equivalent of 0.75 lb a.i./Acre per season from any azoxystrobin-containing products. Pre-harvest Interval (PHI) = 0 Day.		

CUCURBIT VEGETABLES, Crop Group 9

Cantaloupe; Chayote; Chinese-Waxgourd; Cucumber; Gourds; Honeydew Melon; *Momordica* spp. (bitter melon, balsam apple); Muskmelon; Watermelon; Pumpkin; Squash; Zucchini; Varieties, Cultivars and/or Hybrids of these

Target Disease	Use Rate fl oz product/A (lb a.i/A)	Application Directions
Anthracnose (*Colletotrichum lagenarium)* Belly rot *(Rhizoctonia solani)* Downy mildew *(Pseudoperonospora cubensis)* Gummy stem blight *(Didymella bryoniae)* Leaf spots *(Alternaria* spp., *Cercospora* spp.) Myrothecium canker *(Myrothecium roridum)* Plectosporium blight *(Plectosporium tabacinum)* Powdery Mildew (*Sphaerotheca fuliginea*), *(Erysiphe cichoracearum)* Ulocladium Leaf Spot (*Ulocladium cucurbitae*)	6.0-15.5 (0.10-0.25)	<u>For downy mildew and powdery mildew</u>, make preventative applications at 5- to 7-day intervals. <u>For belly rot control</u>, make the first application at the 1-3 leaf crop stage with a second application just before vines tip over or 10-14 days later, whichever occurs first. <u>For all other diseases</u>, begin applications prior to disease development and continue throughout the season at 7- to 14-day intervals following the resistance management guidelines. Apply by ground, air, or chemigation. An adjuvant may be added at label specified rates. Do not tank mix this product with crop oil concentrates (COC), methylated spray oil (MSO) or silicon adjuvants. Do not tank mix this product with malathion, Kelthane®, Thiodan®, Phaser®, Lannate®, Lorsban®, M-Pede® or Botran®. Do not make more than one application of this product or other Group 11 fungicides before alternating with a fungicide that has a different mode of action. Do not make more than four (4) foliar applications of this product or other Group 11 fungicides per crop per acre per year.

Soilborne diseases Rhizoctonia root rot *(Rhizoctonia solani)*	0.4-0.8 fl oz/1000 row ft	For soilborne/seedling disease control, see directions and rates under **SOILBORNE/SEEDLING DISEASE CONTROL** section.
Use Limitations: Do not exceed 92.3 fl oz of this product/Acre per season. Do not exceed the equivalent of 1.5 lb a.i./Acre per season from any azoxystrobin-containing products. Pre-harvest Interval (PHI) = 1 Day.		

FRUITING VEGETABLES – PEPPER / EGGPLANT Subgroup 8-10B *

African Eggplant; Bell Pepper; Eggplant; Martynia; Nonbell Pepper; Okra; Pea Eggplant; Pepino; Roselle; Scarlet Eggplant; Cultivars, Varieties, and/or Hybrids of these

For use on tomatoes, see crop specific Application Directions for Tomato Subgroup 8-10A

Target Disease	Use Rate fl oz product/A (lb a.i/A)	Application Directions
Anthracnose (*Colletotrichum* spp.) Powdery Mildew (*Sphaerotheca* spp.)	6.0-15.5 (0.10-0.25)	Begin applications prior to disease development and continue throughout the season at 7- to 14-day intervals following the resistance management guidelines. Apply by ground, air, or chemigation. An adjuvant may be added at label specified rates. Do not make more than one application of this product or other Group 11 fungicides before alternating with a fungicide that has a different mode of action.
Soilborne diseases Rhizoctonia seedling rot *(Rhizoctonia solani)*	0.4-0.8 fl oz/1000 row ft	For soilborne/seedling disease control, see directions and rates under **SOILBORNE/SEEDLING DISEASE CONTROL** section.
Use Limitations: Do not exceed 61.5 fl oz of this product/Acre per season. Do not exceed the equivalent of 1.0 lb a.i./Acre per season from any azoxystrobin-containing products. Pre-harvest Interval (PHI) = 0 Day.		

HERBS & SPICES (Except Black Pepper), Crop Group 19

Allspice; Angelica; Anise (seed); Anise (star); Annatto (seed); Balm; Basil; Borage; Burnet; Camomile; Caper (buds); caraway; Caraway (black); cardamom; Cassia Bark; Cassia Buds; Catnip; Celery Seed; Chervil (dried); Chinese Chive; Chive; Cinnamon; Clary; Clove Buds; Coriander Leaf (cilantro or Chinese parsley); Coriander Seed (cilantro); Costmary; Culantro (leaf); Culantro (seed); Cumin; Curry (leaf); Dill (dillweed); Dill (seed); Fennel (common); Florence Fennel (seed); Fenugreek; Grains of Paradise; Horehound; Hyssop; Juniper Berry; Lavender; Lemongrass; Lovage (leaf); Lovage (seed); Mace; Marigold; Marjoram; Mustard (seed); Nasturtium; Nutmeg; Parsley (dried); Pennyroyal; Pepper (black and white); Poppy (seed); Rosemary; Rue; Saffron; Sage; Savory (summer and winter); Sweet Bay; Tansy; Tarragon; Thyme; Vanilla; Wasabi, Wintergreen; Woodruff; Wormwood

Target Disease	Use Rate fl oz product/A (lb a.i/A)	Application Directions
Corynespora blight (*Corynaspora cassiicola*) Dill blight (*Cercosporidium punctum*) Phoma blight (*Passalora puncta*)	6.0-15.5 (0.10-0.25)	Begin applications at the onset of disease development and continue throughout the season at 7-day intervals following the resistance management guidelines, Apply by ground only. An adjuvant may be added at label specified rates. Use a minimum of 30 gallons of water per acre. Do not make more than two (2) sequential applications of this product or other Group 11 fungicides before alternating with a fungicide that has a different mode of action.
Fusarium Rhizome and Root Rot (*Pythium* spp.)	6.2-15.4 (0.10-0.25)	**For Wasabi only**: Begin applications at the onset of disease development and continue throughout the season at 7-day intervals following the resistance management guidelines, Apply by ground or chemigation. An adjuvant may be added at label specified rates. Use a minimum of 30 gallons of water per acre.

		Do not make more than two (2) sequential applications of this product or other Group 11 fungicides before alternating with a fungicide that has a different mode of action.
Use Limitations: Do not exceed 92.3 fl oz of this product/Acre per season. Do not exceed the equivalent of 1.5 lb a.i./Acre per season from any azoxystrobin-containing products. Pre-harvest Interval (PHI) = 0 Day.		

LEAFY VEGETABLES (Except Brassica)

Amaranth, Arugula, Cardoon, Celery, Celtuce, Chervil, Chrysanthemum (edible), Coriander leaves (Cilantro), Corn salad, Cress, Dandelion, Dock, Endive, Fennel, Lettuce (head and leaf), Orach, Parsley, Purslane, Radicchio, Rhubarb, Spinach, Swiss Chard, Cultivars, Varieties, and/or Hybrids of these

Target Disease	Use Rate fl oz product/A (lb a.i/A)	Application Directions
Foliar Diseases Alternaria leaf spot *(Alternaria sonchi, A. spp.)* Anthracnose *(Microdochium panattonianum, Colletotrichum dematium)* Cercospora leaf spot *(Cercospora spp.)* Septoria leaf spot *(Septoria petroselini)* White rust *(Albugo occidentalis)*	6.0-15.5 (0.10-0.25)	For downy and powdery mildew, make preventative applications at 5- to 7-day intervals. For all other diseases, begin applications prior to disease development and continue throughout the season at 7- to 14-day intervals following the resistance management guidelines. Apply by ground, air, or chemigation. An adjuvant may be added at label specified rates. Do not make more than one application of this product or other Group 11 fungicides before alternating with a fungicide that has a different mode of action. **ATTENTION** Applications of this product to leafy vegetable foliage may contribute to foliar phytotoxicity under certain circumstances. Proceed with caution with regard to tank mixes and adjuvants when treating any leafy vegetable crops with this product. When treating leaf lettuce, do not tank mix this product with AMBUSH® WP, Pounce® WP, Aliette®, Warrior® with Zeon ™ Technology, or any other product that may increase the penetration of this product into the leaf surface such as, but not limited to, silicone wetters.
Downy mildew *(Bremia lactucae)* Powdery mildew *(Eyrisiphe cichoracearum)*	12.0-15.5 (0.20-0.25)	
Soilborne Diseases Web blight, Bottom rot, Crater rot, Root rot *(Rhizoctonia solani)*	0.4-0.8 fl oz/ 1000 row ft	For soilborne/seedling disease control, see directions and rates under **SOILBORNE/SEEDLING DISEASE CONTROL** section.
Use Limitations: Do not exceed 92.3 fl oz of this product/Acre per season. Do not exceed the equivalent of 1.5 lb a.i./Acre per season from any azoxystrobin-containing products. Pre-harvest Interval (PHI) = 0 Day.		

TOMATO Subgroup 8-10A

Bush Tomato; Cocona; Currant Tomato; Garden Huckleberry; Goji Berry; Groundcherry; Naranjilla; Sunberry; Tomatillo; Tomato; Tree Tomato; Cultivars, Varieties, and/or Hybrids of these

Target Disease	Use Rate fl oz product/A (lb a.i/A)	Application Directions
Anthracnose *(Colletotrichum coccodes)* Black mold *(Alternaria alternata)* Buckeye rot *(Phytophthora* spp.) Early blight *(Alternaria solani)* Powdery Mildew *(Oidiopsis sicula)* Septoria Leaf Spot *(Septoria lycopersici)* Target spot *(Corynespora cassiicola)*	5.0-6.2 (0.08-0.10)	Begin applications prior to disease development and continue throughout the season following the resistance management guidelines. Apply by ground, air, or chemigation. For late blight, apply this product at 5- to 7- day intervals. For all other tomato diseases, make applications at 7- to 21-day intervals. Use of adjuvants may result in severe phytotoxicity. Do not exceed 0.125% adjuvant (v/v). Thank mixtures with dimethoate may cause phytotoxicity. For fresh market tomatoes, do not use adjuvants or tank mix this product with other pesticides formulated as emulsifiable concentrates (EC). Do not make more than one application of this product or other Group 11 fungicides before alternating with a fungicide that has a different mode of action.
Late Blight *(Phytophthora infestans)*	6.2 (0.10)	
Use Limitations: Do not exceed 37 fl oz of product/Acre per season. Do not exceed the equivalent of 0.6 lb a.i./Acre per season from any azoxystrobin-containing product. Pre-harvest Interval (PHI) = 0 Day.		

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage and disposal.

PESTICIDE STORAGE Store in original containers only. Keep container closed when not in use. Do not store near food or feed. In case of spill on floor or paved surfaces, mop and remove to chemical waste storage area until proper disposal can be made if product cannot be used according to the label.

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative of the nearest EPA Regional Office for guidance.

CONTAINER HANDLING:

[Note to Reviewer: The following statement will be included on all Final Printed Labels bearing multiple Container Handling statements] **"NOTE:** This product is available in multiple containers. Refer to the Net Contents section of this product's labeling for the applicable "Nonrefillable" or "Refillable" designation. Follow the container handling instructions below that apply to your container type/size."

[Nonrefillable Containers 5 Gallons or Less]

Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. **Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke.

[Nonrefillable containers larger than 5 gallons]

Nonrefillable container. Do not reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure-rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

[Refillable containers larger than 5 gallons]

Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times

WARRANTY DISCLAIMER

The directions for use of this product must be followed carefully. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, (1) THE GOODS DELIVERED TO YOU ARE FURNISHED "AS IS" BY MANUFACTURER OR SELLER AND (2) MANUFACTURER AND SELLER MAKE NO WARRANTIES, GUARANTEES, OR REPRESENTATIONS OF ANY KIND TO BUYER OR USER, EITHER EXPRESS OR IMPLIED, OR BY USAGE OF TRADE, STATUTORY OR OTHERWISE, WITH REGARD TO THE PRODUCT SOLD, INCLUDING, BUT NOT LIMITED TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, USE, OR ELIGIBILITY OF THE PRODUCT FOR ANY PARTICULAR TRADE USAGE. UNINTENDED CONSEQUENCES, INCLUDING BUT NOT LIMITED TO INEFFECTIVENESS, MAY RESULT BECAUSE OF SUCH FACTORS AS THE PRESENCE OR ABSENCE OF OTHER MATERIALS USED IN COMBINATION WITH THE GOODS, OR THE MANNER OF USE OR APPLICATION, INCLUDING WEATHER, ALL OF WHICH ARE BEYOND THE CONTROL OF MANUFACTURER OR SELLER AND ASSUMED BY BUYER OR USER. THIS WRITING CONTAINS ALL OF THE REPRESENTATIONS AND AGREEMENTS BETWEEN BUYER, MANUFACTURER AND SELLER, AND NO PERSON OR AGENT OF MANUFACTURER OR SELLER HAS ANY AUTHORITY TO MAKE ANY REPRESENTATION OR WARRANTY OR AGREEMENT RELATING IN ANY WAY TO THESE GOODS.

LABEL HISTORY

NOT TO BE PART OF THE PRINTED LABEL
For Regulatory Use Only

File Name	Revision Mark	Comment
000228-00XXX.20130925.draft	RV092513	Application for registration of a new end-use product – PRIA Action Category R310

LIMITATION OF LIABILITY

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, IN NO EVENT SHALL MANUFACTURER OR SELLER BE LIABLE FOR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, OR FOR DAMAGES IN THEIR NATURE OF PENALTIES RELATING TO THE GOODS SOLD, INCLUDING USE, APPLICATION, HANDLING, AND DISPOSAL. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, MANUFACTURER OR SELLER SHALL NOT BE LIABLE TO BUYER OR USER BY WAY OF INDEMNIFICATION TO BUYER OR TO CUSTOMERS OF BUYER, IF ANY, OR FOR ANY DAMAGES OR SUMS OF MONEY, CLAIMS OR DEMANDS WHATSOEVER, RESULTING FROM OR BY REASON OF, OR RISING OUT OF THE MISUSE, OR FAILURE TO FOLLOW LABEL WARNINGS OR INSTRUCTIONS FOR USE, OF THE GOODS SOLD BY MANUFACTURER OR SELLER TO BUYER. ALL SUCH RISKS SHALL BE ASSUMED BY THE BUYER, USER, OR ITS CUSTOMERS. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BUYER'S OR USER'S EXCLUSIVE REMEDY, AND MANUFACTURER'S OR SELLER'S TOTAL LIABILITY SHALL BE FOR DAMAGES NOT EXCEEDING THE COST OF THE PRODUCT.

If you do not agree with or do not accept any of the directions for use, the warranty disclaimers, or limitations of liability, do not use the product and return it unopened to the Seller, and the purchase price will be refunded.

(RV092513)

Pages 261-270*Confidential Statement of Formula may be entitled to confidential treatment*

INERT STATUS FORM

Reviewer Name: Alganesh Debesai			Request date 3/18/2014
Tel: 703-308-8353	RD/IIAB	CUBE: S-7954	MAIL CODE: 7505P

A. COMMENTS:

See comments under Ingredient No. 1.

B. PESTICIDE PRODUCT INFORMATION:

Receipt Number: S-949167 EPA Reg. No/File Symbol: 228-724 Product Name: UPGRADE fungicide	Date on CSF: 3/14/14 Formulation: BASIC	Food-Use Pesticide: [X] Yes [x]No

C. INGREDIENT INFORMATION:

Tolerance Exemption(s)[1]

Ingredient No.1

	910	920	930	940	950	960
Chem. Name:						
Trade Names: [redacted]						
CAS Reg. No.: [redacted]						
Comments: These inert mixture is not approved for use in post-harvest applications.						

Ingredient No. 2

Chem. Name:						
Trade Name						
CAS Reg. No						
Comments:						

Ingredient No. 3

Chem. Name:						
Trade Name:						
CAS Reg. No.:						

due to incorrect
reg # on basic
Alga looked at
wrong product label
This inert is
OK for this product
—Erin

Completed By: A. Debesai 4.1.14

[1]*Language from the Code of Federal Regulations (40 CFR 180, ...*
40 CFR 180.910: Inert ingredients used pre- and post-harvest; 40 CFR 180.920: Inert ingredients ... pre-harvest; 40 CFR 180.930: Inert ingredients applied to animals; 40 CFR 180.940: Tolerance exemptions for active and inert ingredients for use in antimicrobial formulations; 40 CFR 180.950: Tolerance exemptions for minimal risk active and inert ingredients; and 40 CFR 180.960: Polymers.

228-724-BASIC dated 3-14-14

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